

**Geneva Rock Products
Point of the Mountain Facility
(Hansen-Lehi Pit and Mount Jordan Pit)**

Site ID:
10565 & 12776

Description of Facility:

The Geneva Rock Products Point of the Mountain Facility is an aggregate processing facility that consists of the Hansen-Lehi Pit and the Mount Jordan Pit. The Hansen-Lehi Pit is on the east side of I-15 and the Mount Jordan Pit is on the west side of I-15. Aggregate material is mined from open pits and processed in aggregate processing equipment. The processed aggregate is then sent off site or used to produce concrete or hot mix asphalt. The equipment at the Point of the Mountain Facility consists of crushers, screens, conveyors, other aggregate processing equipment, hot mix asphalt equipment (dryers, baghouses, heaters, storage bins, etc), concrete batch plant equipment (mixers, baghouses, storage silos, boilers, etc.), and various diesel generators.

Current Permits:

DAQE-AN0105650018-09 dated November 30, 2009 (Hansen-Lehi)
DAQE-AN0127760005-09 dated April 2, 2009 (Mount Jordan)

SIP:

The Geneva Rock Products Point of the Mountain Facility was listed in 2.2.P in the 1994 SIP and in Section IX, Part H (e) in the 2005 SIP. These sections have been included in this document.

Existing Actual Emissions (from 2008 inventory) for the Hansen-Lehi Pit

PM10	PM2.5	SO2	NOx	VOC	CO	NH3	Benzene	Chlorine	HCl
82.81	26.02	14.13	102.11	18.61	58.25	0	0	0	0

Emissions Information / Discussion

The emission information above is from the 2008 inventory. The facility went through a permit modification in 2009, which increased potential emissions; however, production at the facility was high in 2008 and has since decreased, which would result in a lower actual emission rate. In evaluating emission rates for the SIP, the total emissions from the facility were kept at the 2008 levels, but the percentage of what emissions were coming from what source were adjusted to reflect the current permit numbers. From the 2008 inventory, 54.4% of the NOx emissions, 8.7% of the SO2 emissions, and 37.6% of the VOC emissions are tailpipe emissions from mobile equipment (loaders, dozers, etc.). Production limits, which are contained in the 2005 SIP, keep emissions below Title V thresholds.

PM2.5 RACT Options

Fugitive Dust Sources (Storage Piles, Haul Roads, Exposed Areas, etc.)

Control Options:

Depending on the source, controls for PM2.5 emissions from fugitive dust sources could include the following:

Enclosures,
Conveyors,
Wind Breaks,
Chemical Suppressants,
Water Application,
Vegetation,
Paving,
Best Management Practices,

Technical Feasibility:

The controls listed above are all technically feasible in most situations. In active mining areas, the terrain is consistently changing, so the only potential options would be water application and best management practices. Water application may also be infeasible if the terrain prevents water trucks or water cannons from reaching the mining area. Chemical suppressants may also be technically infeasible where the chemicals could come into contact with the product and negatively impact the quality of the product.

Economic Feasibility:

The PM2.5 fraction of fugitive dust emissions is small (10% - 40% of PM10); therefore, most control options are considered expensive when compared to the amount of PM2.5 that is controlled from fugitive dust sources.

The least expensive option for storage piles and exposed areas was chemical suppressants (MgCl). Chemical suppressants would cost over \$24,000 per ton of PM2.5 removed from storage piles. This did not include the additional water that would be needed to supplement the chemical suppressants. For haul roads, the amount of emissions is proportional to the amount of product produced. Paving costs are around \$4,600 per ton of PM2.5 removed for haul roads that have 8,000,000 tons of product transported on them. All haul roads that have this amount of material transported on them are already paved at the Point of the Mountain Facility. Water application is already used on all unpaved haul roads, so no additional reductions would result from further evaluation of controls on haul roads.

Implementation Schedule:

The RACT analysis determined that no additional controls for fugitive dust sources than what is already being conducted at the Point of the Mountain Facility would be required. To obtain reductions from other fugitive dust sources, the DAQ has proposed changes to R307-309.

Aggregate Processing Equipment (Crushers, Screens, Conveyors, etc.) and Concrete Batch Plants

Control Options:

Controls for PM2.5 emissions from aggregate processing equipment include the following:

Water Application,
Enclosures,
Add-on Control Device:
 Baghouse,
 Electro Static Precipitator
 Wet Scrubber
 Cyclone

Technical Feasibility:

The controls listed above are all technically feasible in most situations. Water cannot be used in concrete batch plants because the material must remain dry until mixing. In the mixing process a specified amount of water is added, and too much water will affect product quality.

Economic Feasibility:

Water application has been determined to be economically feasible for aggregate processing equipment. The additional enclosures and add-on control devices for aggregate processing equipment was determined to be economically infeasible. Since water cannot be used to control emissions from concrete batch plants, baghouse and fabric filter controls are economically feasible. Emission rates from this equipment vary depending on the amount of material being processed. The current NSPS Subpart OOO has opacity limits for new equipment as follows: Crushers – 12%, Screens – 7%, Conveyors – 7%, and Baghouses/Fabric Filters – 7%. Equipment and cost modifications to the existing equipment would be minimal for a source to meet these standards.

Approximate Cost:

For aggregate processing equipment, water application was determined to be around \$650 per ton of PM2.5 removed. The existing concrete batch plant at the Point of the Mountain Facility already has baghouse and fabric filter controls; therefore, a cost estimate was not obtained from this source.

Implementation Schedule:

Most sources are already meeting the proposed limits above. Any modifications to existing equipment can be made before the June 2013. To obtain reductions from aggregate processing equipment and concrete batch plants throughout the PM2.5 nonattainment area, the DAQ has proposed R307-312 to control emissions from the aggregate processing industry. All aggregate processing operations, including Geneva Rock Products - Point of the Mountain Facility, will be required to comply with R307-312 to reduce emissions.

Hot Mix Asphalt Plants

Control Options:

Controls for PM_{2.5} emissions from hot mix asphalt plants include the following:

Add-on Control Device:

- Baghouse,
- Electro Static Precipitator
- Wet Scrubber
- Cyclone

Technical Feasibility:

The controls listed above are all technically feasible to control filterable PM_{2.5} emissions. No controls were identified that would control condensable PM_{2.5} emissions from hot mix asphalt plants.

Economic Feasibility:

All controls listed above are economically feasible to control filterable PM_{2.5} emissions. The option with the highest control efficiency is the baghouse. Since 1995, filterable PM₁₀ emission rates from hot mix asphalt plants have been at or lower than 0.024 grains per dry standard cubic foot of air (gr/dscf). If a source can meet the PM₁₀ limit, the source can meet the same limit for PM_{2.5}. A more stringent limit was not used because exact PM_{2.5} emission rates were not available. A few condensable PM emission rates were available, but values varied between 5% and 85% of the total PM values. Due to the inconsistent condensable emission rates and the lack of potential controls for condensable emissions, a limit was not included for condensable emissions.

Approximate Cost:

All facilities constructed after 1995 would be required to meet the 0.024 gr/dscf limit; therefore, there would be no cost to these facilities. Sources would be required to retrofit their plants older than 1995 to come into compliance with the limit.

Implementation Schedule:

Most sources are already meeting the proposed limits above. In the current PM₁₀ nonattainment areas, sources are required to conduct a stack test of permit limits every three years; therefore, compliance must be demonstrated within three years of issuance of the SIP. To obtain reductions from hot mix asphalt plants throughout the PM_{2.5} nonattainment area, the DAQ has proposed R307-312 to control emissions from the aggregate industry. All hot mix asphalt plants, including Geneva Rock Products - Point of the Mountain Facility, will be required to comply with R307-312 to reduce emissions by December 14, 2015.

Stationary Diesel-Fired Engines

Control Options:

Controls for PM_{2.5} emissions from stationary diesel-fired engines include the following:

Diesel Particulate Filters (DPF)

Engine Design:

Tier I

Tier II

Tier III

Tier IVi

Technical Feasibility:

DPF may be used to meet the emission standards listed under the engine design, so this specific technology was not evaluated. Each tier has separate requirements for different sized engines.

Economic Feasibility:

Engines that provide primary power to aggregate processing operations are usually greater than 900 hp. Smaller engines usually operate periodically and do not generate enough emissions to be economically feasible to be retrofitted with controls. Costs were evaluated for engines greater than 900 hp, but the Geneva Rock Products - Point of the Mountain Facility does not have any stationary diesel-fired engines rated 900 hp or greater. Therefore, no further analysis was conducted for diesel-fired engines.

NOx & SO2 RACT Options

Hot Mix Asphalt Plants

Control Options:

Controls for NOx and SO2 emissions from hot mix asphalt plants include the following:

Low-NOx Burners,
SCR,
NSCR,
SO2 Scrubber,
Low Sulfur Fuels,
Other Fuels Include:
 Waste Oil
 Fuel Oil/Heating Oil
 Natural Gas/Propane

Technical Feasibility:

All the controls listed above are all technically feasible; however, SCR, NSCR, and SO2 Scrubbers have not been used to control emissions from hot mix asphalt plants in Utah. Most facilities are equipped with Low-NOx burners, so further reductions cannot be obtained. The add-on controls listed above were not evaluated further.

Economic Feasibility:

Hot mix asphalt plants are able to utilize a variety of fuels. The fuel that generates the lowest emissions is natural gas or propane. The fuel that generates the highest emissions is waste/used oil. Natural gas produces approximately half of the NOx emissions that waste oil produces; however, the combustion of waste oil has beneficial uses in that the waste oil is not disposed of as a hazardous waste. The cost of the fuel used has a great effect on the final cost of the product. As of August 2012, natural gas was the cheapest fuel available for hot mix asphalt plants; however, if natural gas prices increase or if waste oil prices decrease, it may not be economically feasible to use natural gas. During the winter inversion season (November 1st to March 1st), production of hot mix asphalt is significantly reduced. To allow sources the flexibility to utilize different fuels as necessary during the inversion season, sources will be required to reduce hot mix asphalt production by half when utilizing a fuel other than natural gas. The resulting NOx and SO2 reductions will then be reflected in the SIP model.

Approximate Cost:

Fuel prices vary over time. As of August 2012, there would be no cost to sources. If natural gas prices increase or if waste oil prices decrease, the source would be required to produce less product; however, since this would only apply during the inversion season, production would already be reduced, so it is expected that there would be minimal cost to sources.

Implementation Schedule:

To obtain reductions from hot mix asphalt plants throughout the PM2.5 nonattainment area, the DAQ has proposed R307-312 to control emissions from the aggregate industry. All hot mix asphalt plants, including Geneva Rock Products - Point of the Mountain Facility, will be required to comply with R307-312 to reduce emissions.

Results of Analysis

The following was determined to represent RACT for the Geneva Rock Products - Point of the Mountain Facility:

Fugitive Dust Sources –

All Crushers –

All Screens –

All Conveyors –

All Concrete Batch Plants –

All Hot Mix Asphalt Plants –

All Hot Mix Asphalt Plants –

Control Strategies Listed in R307-309

12% Opacity

7% Opacity

7% Opacity

7% Opacity

0.024 gr/dscf

**50% production when not using natural gas during
November 1st to March 1st**

Compliance Demonstration Methodology:

All fugitive dust sources will be required to comply with R307-309 within 30 days of the effective date of the rule. All hot mix asphalt plants will be required to comply with the 0.024 gr/dscf limit by December 14th 2015. All remaining sources will be required to comply with R307-312 by June 7th 2013.

Company: Geneva Rock Products: Point of the Mountain (Hansen-Lehi) Facility
Site ID: 10565
Project: PM 2.5 SIP
Date: 3/15/2012

County FIPS	Category NAICS	NAICS	SIC	Site ID ID	Site Name	Comp ID	Process ID	Process Code	Component Description	Material or Fuel	Component SCC	ID	Height	Diameter	Temp	Flow	Area	Velocity	Lat	Long	Hr/Day	Days/Wk	Wk/yr	Hr/yr	% Ann
35	2	212319	1429	10565	of the M	177290	1	a	Processed Aggregate	Aggregate	30502006	965649	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177291	1	a	Concrete Processing	Concrete	30501101	965650	10	0.003	-72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177282	1	a	CCBP Boiler	Diesel	10300050	179632	10	1	72	12	0.785368163	15.28	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177283	1	a	Oil Heater	Distillate Oil	30500210	179633	10	1	72	12	0.785368163	15.28	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177284	1	a	Material Handling	Aggregate	30502001	965651	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177285	1	a	Wind Erosion	Dust	30502006	965652	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177287	1	a	Bank Run	Aggregate	30502003	965653	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177300	1	a	Paved Haul Roads	Miles Traveled	2296010000	965657	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177302	1	a	Unpaved Haul Roads	Miles Traveled	2296010000	965658	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177303	1	a	Storage Areas	Miles Traveled	2296010000	965659	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177304	1	a	Loader Areas	Miles Traveled	2296010000	965660	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177305	1	a	Dozers	Aggregate	30502007	965662	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177306	1	a	Other Mobile	Diesel	2270002006	965663	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177307	1	a	Blowing	Diesel	2270002006	965664	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177310	1	a	Large Generators - hp hrs	Diesel	20200102	179636	10	1	72	12	0.785368163	15.28	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177312	1	a	Diesel Tanks	Gasoline	30500012	965674	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177320	1	a	Asphalt Tanks	Asphalt	30500012	965675	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177327	1	a	Waste Oil Tanks	Waste Oil	2501990060	965681	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177507	1	a	All Tanks	Aggregate	30500012	965754	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177404	1	a	Hot Mix Asphalt	Hot Mix Asphalt	30502001	965691	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33

All Tanks have been combined into one line item.
Therefore component IDs 177313, 177320, and 177327 are deleted below.
The new Component ID that combines these is 177507 and the release point ID is 965754.
The percentage of the 2008 inventory was changed to the 2009 permitted values.
This was done to more accurately reflect the emissions from the actual site. - ADH

County FIPS	Category NAICS	NAICS	SIC	Site ID ID	Site Name	Comp ID	Process ID	Process Code	Component Description	Material or Fuel	Component SCC	ID	Height	Diameter	Temp	Flow	Area	Velocity	Lat	Long	Hr/Day	Days/Wk	Wk/yr	Hr/yr	% Ann
35	2	212319	1429	10565	of the M	177290	1	a	Processed Aggregate	Aggregate	30502006	965649	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177291	1	a	Concrete Processing	Concrete	30501101	965650	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177282	1	a	CCBP Boiler	Diesel	10300050	179632	10	1	72	12	0.785368163	15.28	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177283	1	a	Oil Heater	Distillate Oil	30500210	179633	10	1	72	12	0.785368163	15.28	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177284	1	a	Material Handling	Aggregate	30502001	965651	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177285	1	a	Wind Erosion	Dust	30502006	965652	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177287	1	a	Bank Run	Aggregate	30502003	965653	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177300	1	a	Paved Haul Roads	Miles Traveled	2296010000	965657	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177302	1	a	Unpaved Haul Roads	Miles Traveled	2296010000	965658	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177303	1	a	Storage Areas	Miles Traveled	2296010000	965659	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177304	1	a	Loader Areas	Miles Traveled	2296010000	965660	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177305	1	a	Dozers	Aggregate	30502007	965662	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177306	1	a	Other Mobile	Diesel	2270002006	965663	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177310	1	a	Large Generators - hp hrs	Diesel	20200102	179636	10	1	72	12	0.785368163	15.28	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177312	1	a	Diesel Tanks	Gasoline	30500012	965674	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177320	1	a	Asphalt Tanks	Asphalt	30500012	965675	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177327	1	a	Waste Oil Tanks	Waste Oil	2501990060	965681	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177507	1	a	All Tanks	Aggregate	30500012	965754	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177404	1	a	Hot Mix Asphalt	Hot Mix Asphalt	30502001	965691	10	0.003	72	0	7.00659E-06	0.00	40.46711	-111.90083	24	7	52	8760	8.33

These emissions have been reduced to include additional control to reduce opacity by 5%.
Emissions were reduced to allow for the use of natural gas during Nov. - Feb. Condition will allow other fuel but at reduced production rate.

County FIPS	Category NAICS	NAICS	SIC	Site ID	Site Name	Comp ID	Process ID	Process Code	Component Description	Material or Fuel	Component SCC	ID	Height	Diameter	Temp	Flow	Area	Velocity	Lat	Long	Hrs/Dw	Days/Wk	Wk/Yr	Hrs/Yr	% Jan
35	2	212319	1429	10565	of the M	177290	1	a	Processed Aggregate	Aggregate	30502006	965646	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177291	1	a	Concrete Processing	Concrete	30501101	965650	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177292	1	a	CCBP Boiler	Diesel	10300501	178632	10	0.003	72	12	0.765398163	15.27887	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177293	1	a	Oil Heater	Distillate Oil	30502010	178633	10	0.003	72	12	0.765398163	15.27887	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177294	1	a	Material Handling	Aggregate	30502006	965651	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177296	1	a	Wind Erosion	Dust	30502006	965653	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177297	1	a	Dozing	Aggregate	30502006	965654	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177300	1	a	Bank Run	Aggregate	2294015000	965657	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177302	1	a	Paved Haul Roads	Miles Traveled	2294010000	965658	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177303	1	a	Unpaved Haul Roads	Miles Traveled	2294010000	965659	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177304	1	a	Loader Areas	Aggregate	30502007	965660	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177305	1	a	Storage Pile	Diesel Oil (No	2501985090	965667	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177306	1	a	Dozers	Diesel	2270002068	965662	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177308	1	a	Loaders	Diesel	2270002068	965663	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177309	1	a	Other Mobile	Diesel	2270002068	965664	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177310	1	a	Blasting	Rock	30502009	965665	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177312	1	a	Large Generators - hp hrs	Diesel	20200102	178638	10	0.003	72	12	0.765398163	15.27887	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177313	1	a	Diesel Tanks	Aggregate	2501985090	965674	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177320	1	a	Gasoline Tanks	Gasoline	38090012	965675	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177321	1	a	Asphalt Tanks	Phthalic Concr	30500012	965681	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177327	1	a	Waste Oil Tanks	Waste Oil	2501985090	965754	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177507	1	a	All Tanks	Hot Mix Asphalt	30500012	965691	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177404	1	a	Hot Mix Asphalt	Hot Mix Asphalt	30500201	965691	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33

County FIPS	Category NAICS	NAICS	SIC	Site ID	Site Name	Comp ID	Process ID	Process Code	Component Description	Material or Fuel	Component SCC	ID	Height	Diameter	Temp	Flow	Area	Velocity	Lat	Long	Hrs/Dw	Days/Wk	Wk/Yr	Hrs/Yr	% Jan
35	2	212319	1429	10565	of the M	177280	1	a	Processed Aggregate	Aggregate	30502006	965646	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177281	1	a	Concrete Processing	Concrete	30501101	965650	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177282	1	a	CCBP Boiler	Diesel	10300501	178632	10	0.003	72	12	0.765398163	15.27887	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177283	1	a	Oil Heater	Distillate Oil	30502010	178633	10	0.003	72	12	0.765398163	15.27887	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177284	1	a	Material Handling	Aggregate	30502006	965651	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177286	1	a	Wind Erosion	Dust	30502006	965653	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177287	1	a	Dozing	Aggregate	30502006	965654	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177300	1	a	Bank Run	Aggregate	2294015000	965657	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177302	1	a	Paved Haul Roads	Miles Traveled	2294010000	965658	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177303	1	a	Unpaved Haul Roads	Miles Traveled	2294010000	965659	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177304	1	a	Loader Areas	Aggregate	30502007	965660	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177305	1	a	Storage Pile	Diesel Oil (No	2501985090	965667	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177306	1	a	Dozers	Diesel	2270002068	965662	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177308	1	a	Loaders	Diesel	2270002068	965663	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177309	1	a	Other Mobile	Diesel	2270002068	965664	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177310	1	a	Blasting	Rock	30502009	965665	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177312	1	a	Large Generators - hp hrs	Diesel	20200102	178638	10	0.003	72	12	0.765398163	15.27887	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177313	1	a	Diesel Tanks	Aggregate	2501985090	965674	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177320	1	a	Gasoline Tanks	Gasoline	38090012	965675	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177321	1	a	Asphalt Tanks	Phthalic Concr	30500012	965681	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177327	1	a	Waste Oil Tanks	Waste Oil	2501985090	965754	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177507	1	a	All Tanks	Hot Mix Asphalt	30500012	965691	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33
35	2	212319	1429	10565	of the M	177404	1	a	Hot Mix Asphalt	Hot Mix Asphalt	30500201	965691	10	0.003	72	0	7.06656E-06	0	40.46711	-111.9083	24	7	52	8760	8.33

2008 Actual Emissions (tons/yr)						
PM10	PM2.5	SO2	NOx	VOC	CO	NH3
82.81	26.02	14.13	102.11	18.61	58.25	0.00
Benzene	Chlorine	HCl				
0.00	0.00	0.00				

2008 Actual Emissions													
Permit	PM10	PM2.5	SO2	NOx	VOC	CO	NH3	Benzene	Chlorine	HCl			
Yes	5,360	0.720	0.000	0.000	0.000	0.000	0.000						
Yes	0.650	0.020	0.000	0.000	0.000	0.000	0.000						
Yes	0.010	0.010	0.000	0.150	0.010	0.120	0.000						
Yes	0.000	0.000	0.000	0.000	0.040	0.000	0.000						
Yes	5,320	0.600	0.000	0.000	0.000	0.000	0.000						
Yes	4,700	2.560	0.000	0.000	0.000	0.000	0.000						
Yes	0.000	0.000	0.000	0.000	0.000	0.000	0.000						
Yes	27,620	4.140	0.000	0.000	0.000	0.000	0.000						
Yes	5,330	0.550	0.000	0.000	0.000	0.000	0.000						
Yes	7,340	0.780	0.000	0.000	0.000	0.000	0.000						
Yes	4,150	0.626	0.000	0.000	0.000	0.000	0.000						
No	0.100	0.000	0.194	0.000	0.000	0.000	0.000						
No	4.126	0.000	0.989	46.073	6.094	13.944	0.000						
No	0.129	0.000	0.031	1.360	0.000	5.370	0.000						
Yes	1.13	1.13	0.560	33.440	0.890	7.660	0.000						
Yes	0.000	0.000	0.000	0.000	0.000	0.000	0.000						
Yes													
Yes													
Yes													
Yes	14.06	14.61	12.190	11.650	10.290	29.360	0.000						

2014 Modelled Emissions (tons/yr)						
PM10	PM2.5	SO2	NOx	VOC	CO	NH3
81.55	25.87	8.04	98.29	18.61	58.25	0.00
Benzene	Chlorine	HCl				
0.00	0.00	0.00				

2014 Modelled Emissions													
Permit	PM10	PM2.5	SO2	NOx	VOC	CO	NH3	Benzene	Chlorine	HCl			
Yes	4,286	0.576	0.000	0.000	0.000	0.000	0.000						
Yes	0.780	0.016	0.000	0.000	0.000	0.000	0.000						
Yes	0.010	0.010	0.000	0.150	0.010	0.120	0.000						
Yes	0.000	0.000	0.000	0.000	0.040	0.000	0.000						
Yes	0.670	0.100	0.000	0.000	0.000	0.000	0.000						
Yes	5,320	2.560	0.000	0.000	0.000	0.000	0.000						
Yes	4,700	2.560	0.000	0.000	0.000	0.000	0.000						
Yes	0.000	0.000	0.000	0.000	0.000	0.000	0.000						
Yes	27,620	4.140	0.000	0.000	0.000	0.000	0.000						
Yes	5,330	0.530	0.000	0.000	0.000	0.000	0.000						
Yes	7,340	0.730	0.000	0.000	0.000	0.000	0.000						
Yes	4,150	0.626	0.000	0.000	0.000	0.000	0.000						
No	0.700	0.000	0.194	7.875	0.756	2.162	0.000						
No	4.126	0.000	0.989	46.073	6.094	13.944	0.000						
No	0.129	0.000	0.031	1.564	0.824	5.370	0.000						
Yes	0.290	0.010	0.160	1.360	0.000	5.370	0.000						
Yes	1.13	1.13	0.560	33.440	0.890	7.660	0.000						
Yes	0.000	0.000	0.000	0.000	0.000	0.000	0.000						
Yes													
Yes													
Yes													
Yes	14.06	14.61	8.005	5.825	10.290	28.360	0.000						

2017 Modified Emissions (tonne/Yr)									
PM10	PM2.5	SO2	NOx	VOC	CO	NH3	Benzene	Chlorine	HCl
81.55	25.87	8.04	96.29	18.61	58.25	0.00	0.00	0.00	0.00

2017 Modified Emissions (tonne/Yr)											
2017 Modified Emissions											
PM10	PM2.5	SO2	NOx	VOC	CO	NH3	Benzene	Chlorine	HCl	Permit Status	Permit Status
4.298	0.576	0	0	0	0	0	0	0	0	Yes	Yes
0.76	0.016	0	0	0	0	0	0	0	0	Yes	Yes
0.01	0.01	0	0.15	0.01	0.12	0	0	0	0	Yes	Yes
0	0	0	0	0.04	0	0	0	0	0	Yes	Yes
0.67	0.1	0	0	0	0	0	0	0	0	Yes	Yes
6.32	0.806	0	0	0	0	0	0	0	0	Yes	Yes
4.7	2.59	0	0	0	0	0	0	0	0	Yes	Yes
27.02	4.14	0	0	0	0	0	0	0	0	Yes	Yes
5.33	0.53	0	0	0	0	0	0	0	0	Yes	Yes
7.34	0.73	0	0	0	0	0	0	0	0	Yes	Yes
4.15	0.628	0	0	0	0	0	0	0	0	Yes	Yes
0.7	0	0.184	7.875	0.756	2.162	0	0	0	0	No	No
4.193	0	0.999	46.073	6.094	13.944	0	0	0	0	No	No
0.129	0	0.031	1.594	0.141	0.624	0	0	0	0	No	No
0.26	0.01	0.16	1.36	0	5.37	0	0	0	0	Yes	Yes
1.126018	1.126018	0.66	33.44	0.89	7.66	0	0	0	0	Yes	Yes
0	0	0	0	0	0	0	0	0	0	Yes	Yes
0	0	0	0	0	0	0	0	0	0	Yes	Yes
0	0	0	0	0	0	0	0	0	0	Yes	Yes
0	0	0	0	0	0	0	0	0	0	Yes	Yes
0	0	0	0	0.38545	0.01	0	0	0	0	Yes	Yes
14.85432	14.8055	6.095	5.825	10.29	28.36	0	0	0	0	Yes	Yes

2017 Modified Emissions (tonne/Yr)									
PM10	PM2.5	SO2	NOx	VOC	CO	NH3	Benzene	Chlorine	HCl
81.55	25.87	8.04	96.29	18.61	58.25	0.00	0.00	0.00	0.00

2017 Modified Emissions (tonne/Yr)											
2017 Modified Emissions											
PM10	PM2.5	SO2	NOx	VOC	CO	NH3	Benzene	Chlorine	HCl	Permit Status	Permit Status
4.298	0.576	0	0	0	0	0	0	0	0	Yes	Yes
0.76	0.016	0	0	0	0	0	0	0	0	Yes	Yes
0.01	0.01	0	0.15	0.01	0.12	0	0	0	0	Yes	Yes
0	0	0	0	0.04	0	0	0	0	0	Yes	Yes
0.67	0.1	0	0	0	0	0	0	0	0	Yes	Yes
6.32	0.806	0	0	0	0	0	0	0	0	Yes	Yes
4.7	2.59	0	0	0	0	0	0	0	0	Yes	Yes
27.02	4.14	0	0	0	0	0	0	0	0	Yes	Yes
5.33	0.53	0	0	0	0	0	0	0	0	Yes	Yes
7.34	0.73	0	0	0	0	0	0	0	0	Yes	Yes
4.15	0.628	0	0	0	0	0	0	0	0	Yes	Yes
0.7	0	0.184	7.875	0.756	2.162	0	0	0	0	No	No
4.193	0	0.999	46.073	6.094	13.944	0	0	0	0	No	No
0.129	0	0.031	1.594	0.141	0.624	0	0	0	0	No	No
0.26	0.01	0.16	1.36	0	5.37	0	0	0	0	Yes	Yes
1.126018	1.126018	0.66	33.44	0.89	7.66	0	0	0	0	Yes	Yes
0	0	0	0	0	0	0	0	0	0	Yes	Yes
0	0	0	0	0	0	0	0	0	0	Yes	Yes
0	0	0	0	0	0	0	0	0	0	Yes	Yes
0	0	0	0	0.38545	0.01	0	0	0	0	Yes	Yes
14.85432	14.8055	6.095	5.825	10.29	28.36	0	0	0	0	Yes	Yes



State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF AIR QUALITY
Cheryl Heying
Director

DAQE-AN0105650018-09

November 30, 2009

Mike Edwards
Geneva Rock Products, Inc.
1565 West 400 North
P.O. Box 538
Orem, UT 84057

Dear Mr. Edwards:

Re: Approval Order: Administrative Amendment to DAQE-AN0105650017-09 to Combine the Diesel Fuel Throughput Limitations and to Clarify Language for Calculating the Diesel Generator NO_x Emissions, Salt Lake County; CDS SM; NSPS (Part 60), Nonattainment or Maintenance Area, PM₁₀ SIP / Maint Plan
Project Number: N010565-0018

The attached document is the Approval Order for the above-referenced project. Future correspondence on this Approval Order should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. The project engineer for this action is Jon Black, who may be reached at (801) 536-4047.

Sincerely,

M. Cheryl Heying, Executive Secretary
Utah Air Quality Board

MCH:JB:kw

cc: Mike Owens
Salt Lake Valley Health Department

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

**APPROVAL ORDER: Administrative Amendment to DAQE-
AN0105650017-09 to Combine the Diesel Fuel Throughput
Limitations and to Clarify Language for Calculating the Diesel
Generator NO_x Emissions**

**Prepared By: Jon Black, Engineer
Phone: (801) 536-4047
Email: jlblack@utah.gov**

APPROVAL ORDER NUMBER

DAQE-AN0105650018-09

Date: November 30, 2009

**Geneva Rock Products, Inc.
Point of the Mountain (Hansen-Lehi) Facility
Source Contact:
Mr. Mike Edwards
Phone: (801) 281-7890**

**M. Cheryl Heying
Executive Secretary
Utah Air Quality Board**

Abstract

Geneva Rock Products, Inc. (GRP) submitted a request for an Administrative Amendment to Conditions II.B.1.f and II.B.5.b of AO DAQE-AN0105650017-09 dated August 5, 2009 (Hansen-Lehi Plant). The Amendments will combine the language of Conditions II.B.1.f.A and II.B.1.f.B combining the throughput limits of all diesel storage tanks and will clarify Condition II.B.5.b to ensure that the diesel generator emission limitations are calculated properly and compliance with the annual NO_x emission limitation for the stationary diesel generators can be easily determined. There are no changes to the content of the permit, just a language clarification to Conditions II.B.1.f and II.B.5. This plant is located in Salt Lake County, which is a Non-attainment area of the NAAQS for PM_{10} & SO_2 , and is a Maintenance area for O_3 . NSPS Subpart A, I, & OOO regulations apply to this source. NESHAP and MACT regulations do not apply to this source. Title V of the 1990 Clean Air Act applies to this source.

The potential to emit emissions, in tons per year, will remain as follows: PM_{10} = 128.86 (125.58 fugitive, 3.28 point source), NO_x = 65.58 (13.07 from fugitive blasting), SO_2 = 25.93, CO = 111.98 (51.52 from fugitive blasting), VOC = 20.94, HAPs = 4.42.

This air quality AO authorizes the project with the following conditions and failure to comply with any of the conditions may constitute a violation of this order. This AO is issued to, and applies to the following:

Name of Permittee:

Geneva Rock Products, Inc.
1565 West 400 North
P.O. Box 538
Orem, UT 84057

Permitted Location:

Point of the Mountain (Hansen-Lehi) Facility
15547 South Minuteman Drive
Draper, UT 84020

UTM coordinates: 423,090 m Easting, 4,480,190 m Northing
SIC code: 1442 (Construction Sand & Gravel)

Section I: GENERAL PROVISIONS

- I.1 All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and 40 CFR. Unless noted otherwise, references cited in these AO conditions refer to those rules. [R307-101]
- I.2 The limits set forth in this AO shall not be exceeded without prior approval. [R307-401]
- I.3 Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved. [R307-401-1]
- I.4 All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's representative upon request, and the records shall include the two-year period prior to the date of the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of two (2) years. [R307-401]
- I.5 At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air

pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded. [R307-401-4]

- I.6 The owner/operator shall comply with R307-150 Series. Inventories, Testing and Monitoring. [R307-150]
- I.7 The owner/operator shall comply with UAC R307-107. General Requirements: Unavoidable Breakdowns. [R307-107]

Section II: SPECIAL PROVISIONS

II.A The approved installations shall consist of the following equipment:

II.A.1 Point of the Mountain, Hansen-Lehi, Plant

II.A.2 Crusher 1
Rated Capacity: 385 tph

II.A.3 Crusher 2
Rated Capacity: 335 tph

II.A.4 Crusher 3
Rated Capacity: 400 tph

II.A.5 Crusher 4
Rated Capacity: 380 tph

II.A.6 Crusher 5
Rated Capacity: 275 tph

II.A.7 Crusher 6
Rated Capacity: 620 tph

II.A.8 Crusher 7
Rated Capacity: 250 tph

II.A.9 Portable Oversized Crusher
Rated Capacity: 400 tph

II.A.10 Screen 1
Rated Capacity: 750 tph

II.A.11 Screen 2
Rated Capacity: 750 tph

- | | |
|---------|--|
| II.A.12 | Screen 3
Rated Capacity: 750 tph |
| II.A.13 | Screen 4
Rated Capacity: 660 tph |
| II.A.14 | Screen 5
Rated Capacity: 275 tph |
| II.A.15 | Screen 6
Rated Capacity: 920 tph |
| II.A.16 | Screen 7
Rated Capacity: 920 tph |
| II.A.17 | Screen 8
Rated Capacity: 920 tph |
| II.A.18 | Screen 9
Rated Capacity: 550 tph |
| II.A.19 | Screen 10
Rated Capacity: 550 tph |
| II.A.20 | Screen 11
Rated Capacity: 400 tph |
| II.A.21 | Screen 12
Rated Capacity: 400 tph |
| II.A.22 | Screen 13
Rated Capacity: 400 tph |
| II.A.23 | One (1) Hot Mix Asphalt Plant
Rated Capacity: 500 tph |
| II.A.24 | One (1) Drum Mixer
Fuel Type: Natural Gas, Liquid Propane, #2 thru #6 Fuel Oil, & Used Oil |
| II.A.25 | One (1) Baghouse Control Device |
| II.A.26 | Two (2) Scalping Screens
Rated Capacity: 550 tph each |
| II.A.27 | Two (2) Hot Oil Heaters
Rating: 2.8 MMBTU/hr each |

- II.A.28 **One (1) Central Mix Concrete Batch Plant**
Unit ID - CCBP
Rated Capacity: 280 cubic yards/hr
Control Device: Baghouse
- II.A.29 **One (1) Portable Truck Mix Concrete Batch Plant**
Unit ID - PCBP
Rated Capacity: 220 cubic yards/hr
Control Device: Bin-vent
- II.A.30 **One (1) Hot Water Heater/Boiler**
Unit ID - WHB-CCBP
Rating: 9.9 MMBTU/hr
Fuel Type: Natural Gas/Propane
- II.A.31 **One (1) Hot Water Heater/Boiler**
Unit ID - WHB-PCBP
Rating: 2.9 MMBTU/hr
Fuel Type: Diesel
- II.A.32 **Miscellaneous Processing Equipment**
Equipment Associated with the Aggregate Plants, the Asphalt Plant, and the Concrete Plant
Grizzlies, feeders, splitters, traps, load bins, cold feed bins, conveyors, wet screens, fine material washers, coarse material washers, screws, cyclones, clarifiers, stackers, drilling/blasting equipment, material storage silos, volatile organic liquid storage tanks, etc.
- II.A.33 **Miscellaneous Off Highway Vehicles**
Equipment Associated with the Hansen-Lehi Facility

-listed for informational purposes only-
Front-end loaders, bulldozers, scrapers, drag-lines, track-hoes, haul trucks, water trucks, sweeper truck, fork-lifts, boom trucks, etc.
- II.A.34 **Portable Generator #1**
Fuel Type: Diesel
Rating: 817 hp
- II.A.35 **Portable Generator #2**
Fuel Type: Diesel
Rating: 665 hp
- II.A.36 **Portable Generator #3**
Fuel Type: Diesel
Rating: 120 hp
- II.A.37 **Portable Generator #4**
Fuel Type: Diesel
Rating: 65 hp

II.A.38 **Portable Generator #5**
Fuel Type: Diesel
Rating: 65 hp

II.A.39 **Portable Generator #6**
Fuel Type: Diesel
Rating: 400 hp

II.B Requirements and Limitations

II.B.1 **The Hansen-Lehi Facility shall be subject to the following**

II.B.1.a The GRP Point of the Mountain location is a State Implementation Plan (SIP) source consisting of the Hansen-Lehi and Mount Jordan pits and is listed in Section IX, Part H, Page 12 of the Salt Lake County SIP. [R307-110]

II.B.1.b Unless otherwise specified in this AO, the owner/operator shall not allow visible emissions from any stationary source on site to exceed 20 percent opacity. [R307-305]

II.B.1.b.1 Unless otherwise specified in this AO, opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9. [R307-305]

II.B.1.c Unless otherwise specified in this AO, the owner/operator shall use natural gas, liquid propane, #1, #2, a combination of #1 and #2 diesel fuel, or gasoline in all on-site equipment. [R307-401]

II.B.1.d Unless otherwise specified in this AO, the sulfur content of any fuel oil or diesel burned in the on-site equipment (except for the asphalt plant) shall not exceed 0.05 percent by weight. [R307-401]

II.B.1.d.1 Unless otherwise specified in this AO, the sulfur content shall be determined by ASTM Method D4294-89, or approved equivalent. Certification of fuel oil shall be either by the owner/operator's own testing or by test reports from the fuel oil marketer. Certification of other fuels shall be either by the owner/operator's own testing or test reports from the fuel marketer. [R307-401]

II.B.1.e The owner/operator shall not exceed the following throughput limits:

A. 1,834,500 gallons of diesel fuel throughput for the diesel fuel storage tanks per rolling 12-month period.

B. 1,600,000 gallons of waste or burner fuel oil throughput for the storage tanks per rolling 12-month period. [R307-401]

II.B.1.e.1 Records of consumption shall be kept for all periods when the plant is in operation. Consumption shall be determined by vendor receipts, fuel delivery/usage records, and/or any other appropriate mechanism. The records of consumption shall be kept on a daily basis. To

determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. [R307-401]

- II.B.1.f In addition to the requirements of this AO, all applicable provisions of 40 CFR 60, NSPS Subpart A, 40 CFR 60.1 to 60.18 (General Provisions), Subpart I, 40 CFR 60.90 to 60.93 (Standards of Performance for Hot Mix Asphalt Facilities) and Subpart OOO, 40 CFR 60.670 to 60.676 (Standards of Performance for Nonmetallic Mineral Processing Plants) apply to the affected equipment located at the GRP Hansen-Lehi pit operation.

To be in compliance, this source must operate in accordance with the most current version of 40 CFR 60 applicable to this source. [40 CFR 60]

II.B.2 **The Asphalt Plant on site shall be subject to the following**

- II.B.2.a The owner/operator shall not exceed the following consumption/production limits:

- A. 500 tons of asphalt produced per hour (virgin and recycled asphalt pavement (RAP) averaged over each operating day).
- B. 800,000 tons of asphalt production (virgin and RAP combined) per rolling 12-month period.
- C. 44,000 tons of asphalt cement consumed per rolling 12-month period. [R307-401]

- II.B.2.a.1 Compliance with the hourly limitations shall be determined on a daily average (12 a.m. to 12 a.m.). Each day the owner/operator shall calculate a new hourly average based on the previous day's production. Hours of operation shall be determined by supervisor monitoring and maintaining of an operations log.

Records of consumption/production shall be kept for all periods when the plant is in operation. Production/Consumption shall be determined by production scales, scale house records, vendor receipts, fuel delivery/usage records and/or any other appropriate mechanism. The records of consumption/production shall be kept on a daily basis. To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. [R307-401]

- II.B.2.b The asphalt plant baghouse shall control process exhaust from the asphalt drum mixer. This baghouse shall be sized to the design parameter of 110,000 ACFM for the existing conditions. All exhaust air from the drum mixer shall be routed through the baghouse before being vented to the atmosphere. [R307-401]

- II.B.2.c The asphalt plant baghouse stack height shall be a minimum of 65 feet, as measured from the ground level. [R307-401]

- II.B.2.d The pressure drop across the asphalt plant baghouse shall not be less than 2.0 inches of water column or more than 6.0 inches of water column. The pressure gauge shall be located such that an inspector/operator can safely read the indicator at any time. The pressure drop reading shall be accurate to within plus or minus 0.5 inches water column. All instruments shall be

calibrated according to the manufacturer's instructions at least once every 12 months. Continuous recording of the measurements of the monitoring device is not required; however, records of one reading per operational day shall be maintained. [R307-401]

II.B.2.e Emissions to the atmosphere from the Asphalt Plant Baghouse shall not exceed the following rates and concentrations:

Pollutant	lb/hr	grain/dscf (68 degrees F, 29.92 in Hg)
PM ₁₀ (virgin & RAP)	10.6	0.024. [R307-401]

II.B.2.e.1 Stack testing to show compliance with the emission limitations stated in the above condition shall be performed as specified below:

Emission Point: Asphalt Plant Baghouse

Pollutant	Testing Status	Test Frequency
PM ₁₀ (virgin & RAP)	*	#
<p>* Initial compliance testing is required. The initial test date shall be performed as soon as possible and in no case later than 180 days after the start up of a new emission source, an existing source without an AO, or the granting of an AO to an existing emission source that is modified. Compliance testing shall not be required for both virgin and recycled materials during the same testing period. Testing shall be performed for the product being produced during the time of testing.</p>		
<p># Test every three years (or sooner if directed by the Executive Secretary). Tests may be required if the source is suspected to be in violation with other conditions of this AO. Compliance testing shall not be required for both virgin and recycled materials during the same testing period. Testing shall be performed for the product being produced during the time of testing. [R307-165]</p>		

II.B.2.e.2 Notification

The Executive Secretary shall be notified at least 30 days prior to conducting any required emission testing. A source test protocol shall be submitted to DAQ when the testing notification is submitted to the Executive Secretary.

The source test protocol shall be approved by the Executive Secretary prior to performing the test. The source test protocol shall outline the proposed test methodologies, stack to be tested, and procedures to be used. A pretest conference shall be held, if directed by the Executive Secretary. [R307-165]

II.B.2.e.3 Sample Location

The emission point shall be designed to conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other methods as approved by the Executive Secretary. An Occupational Safety and Health Administration (OSHA) or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location. [R307-401]

II.B.2.e.4 Volumetric Flow Rate

40 CFR 60, Appendix A, Method 2 or other testing methods approved by the Executive Secretary. [R307-401]

II.B.2.e.5 PM_{10}

For stacks in which no liquid drops are present, the following methods shall be used: 40 CFR 51, Appendix M, Methods 201, 201a, or other testing methods approved by the Executive Secretary. The back half condensibles shall also be tested using the method specified by the Executive Secretary.

For stacks in which liquid drops are present, methods to eliminate the liquid drops should be explored. If no reasonable method to eliminate the drops exists, then the following methods shall be used: 40 CFR 60, Appendix A, Method 5, 5a, 5d, or 5e as appropriate.

The back half condensibles shall not be used for compliance demonstration but shall be used for inventory purposes. [R307-401]

II.B.2.e.6 Calculations

To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary, to give the results in the specified units of the emission limitation. [R307-401]

II.B.2.e.7 New Source Operation

For a new source/emission point, the production rate during all compliance testing shall be no less than 90% of the maximum production rate (rated capacity) of the plant. If the maximum AO allowable production rate has not been achieved at the time of the test, the following procedure shall be followed:

- 1) Testing shall be at no less than 90% of the production rate achieved to date.
- 2) If the test is passed, the new maximum allowable production rate shall be 110% of the tested achieved rate. This new maximum allowable production rate shall be less than 90% of the allowed maximum production rate. This new allowable maximum production rate shall remain in effect until successfully tested at a higher rate.

- 3) The owner/operator shall request a higher production rate when necessary. Testing at no less than 90% of the higher rate shall be conducted. A new maximum production rate (110% of the new rate) will then be allowed if the test is successful. This process may be repeated until the maximum AO production rate is achieved. [R307-401]

II.B.2.e.8 Existing Source Operation

For an existing source/emission point, the production rate during all compliance testing shall be no less than 90 percent of the maximum production achieved in the previous three (3) years.

In all cases, when testing for PM₁₀ emissions during manufacture of recycled asphalt, recycled asphalt shall be introduced into the plant at a rate no less than 15 percent of the plant production (i.e. if the plant is producing 400 tons per hour of finished product, then asphalt to be recycled shall be introduced into the plant at a rate no less than 60 tons per hour). [R307-401]

- II.B.2.f The owner/operator shall use natural gas, liquid propane, fuel oil, #2 diesel or used oil as fuel in the asphalt plant. [R307-401]

- II.B.2.g The sulfur content of any fuel oil or used oil fuel burned in the HMAP burner shall not exceed 0.5 percent by weight. [R307-401]

- II.B.2.g.1 The sulfur content shall be determined by ASTM Method D-4294-89 or approved equivalent. Certification of fuel oil shall be either by GRP's own testing or by test reports from the fuel oil marketer. Certification of other fuels shall be either by GRP's own testing or by test reports from the fuel marketer. [R307-401]

- II.B.2.h The owner/operator shall record the quantity of all used oil fuel burned in the asphalt plant on a daily basis. The owner/operator shall not transfer to the HMAP fuel tank or burn any used oil fuel unless the used oil fuel meets the following requirements:

Arsenic concentration shall not exceed 5 ppm by weight
Cadmium concentration shall not exceed 2 ppm by weight
Chromium concentration shall not exceed 10 ppm by weight
Lead concentration shall not exceed 100 ppm by weight
Total Halogens concentration shall not exceed 1,000 ppm by weight
Flashpoint shall not exceed 100 degrees Fahrenheit. [R307-401]

- II.B.2.h.1 The owner/operator shall provide test certification for each load of used oil fuel received. Halogen content of used fuel oil shall be determined by ASTM Method D-808-81, EPA Method 8240 or Method 8260. Certification shall be either by the owner/operator's own testing or test reports from the used oil fuel marketer. Records of used oil fuel consumption and the test reports of each load of used oil fuel shall be kept for all periods when the plant is in operation. [R307-401]

- II.B.2.i Sources utilizing used oil as a fuel shall comply with the State Division of Solid and Hazardous Waste in accordance with R315-15, UAC. [R307-401]

II.B.3 The Concrete Plant on site shall be subject to the following

II.B.3.a The CCBP and PCBP shall not produce more than 400,000 cubic yards of concrete combined per rolling 12-month period. [R307-401]

II.B.3.a.1 Records of production shall be kept for all periods when the plant is in operation. Production shall be determined by production scales, scale house records, and/or any other appropriate mechanism. The records of production shall be kept on a daily basis. To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. [R307-401]

II.B.3.b The truck mix batch plant shall use a hood covering the truck inlet when loading the concrete trucks. The hood exhaust shall pass through a bin-vent prior to being vented to the atmosphere. [R307-401]

II.B.4 The Aggregate Plants on site shall be subject to the following

II.B.4.a The owner/operator shall not produce more than 14,000,000 tons of aggregate material (including bank run material) per rolling 12-month period, where no more than 10,275,000 tons of aggregate is passed through a crushing or screening unit prior to product usage or delivery per rolling 12-month period. [R307-401]

II.B.4.a.1 Records of production shall be kept for all periods when the plant is in operation. Production shall be determined by production scales, scale house records, and/or any other appropriate mechanism. The records of production shall be kept on a daily basis. To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. [R307-401]

II.B.5 All Stationary Engines on site shall be subject to the following

II.B.5.a The owner/operator shall not allow visible emissions from any stationary diesel engine on site to exceed 20 percent opacity. [R307-305]

II.B.5.b The plant-wide emissions for NO_x from the stationary diesel powered generators shall not exceed the following:

29.68 tons per rolling 12-month period for NO_x

The NO_x emissions shall be determined by maintaining a record of the operating hours of each diesel generator used on a monthly basis. The operating hours shall be used in the following calculations:

A. The amount of NO_x emitted monthly, in tons, by all diesel generators shall be calculated by the following procedure:

Diesel Generator rating < 600 horsepower (hp)

NO_x = (0.031 lb/hp hr) x [Gen Rating (hp)] x (Operating hours) x (1 ton/2000lb)

Diesel Generator rating > 600 hp

$$\text{NO}_x = (0.024 \text{ lb/hp hr}) \times [\text{Gen Rating (hp)}] \times (\text{Operating hours}) \times (1 \text{ ton}/2000\text{lb})$$

Compliance with the limitation shall be determined on a rolling 12-month total. Based on the last day of each month, a new 12-month total shall be calculated using data from the previous 12 months. Monthly calculations shall be made no later than 20 days after the end of each calendar month. Generator operating hours shall be determined by hour meters installed on the equipment or other appropriate method as established by GRP.

[R307-401]

II.B.5.b.1 To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. Generator hours of operation shall be determined by hour meters installed on the equipment or other appropriate method as established by GRP. [R307-401]

II.B.6 **The Hot Oil Heaters and Hot Water Heaters on site shall be subject to the following**

II.B.6.a All hot water heaters and all hot oil heaters on site shall not exceed the following operational limits:

- A. 8,000 combined hours of operation for both 2.8 MMBTU/hr natural gas (or liquid propane) fired hot oil heaters per rolling 12-month period.
- B. 1,500 hours of operation for the 9.9 MMBTU/hr natural gas (or liquid propane) fired hot water heater per rolling 12-month period.
- C. 500 hours of operation for the 2.9 MMBTU/hr diesel fired hot water heater per rolling 12-month period. [R307-401]

II.B.6.a.1 Hours of operation shall be determined by supervisor monitoring and maintaining of an operations log. The records of operation shall be kept on a daily basis. To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. [R307-401]

II.B.7 **All Haul Roads and Fugitive Dust Sources on site shall be subject to the following**

II.B.7.a GRP shall comply with a Fugitive Dust Control Plan (FDCP) acceptable to the Executive Secretary for control of all fugitive dust sources associated with the Hansen-Lehi plant. GRP shall submit two copies of the FDCP to the Executive Secretary, attention: New Source Review Section and Compliance Section, for approval. Subsequent updates to the FDCP shall be submitted and approved in accordance with the above stated requirements. GRP shall comply with the most current FDCP approved by the Executive Secretary. The haul road speed shall be posted. [R307-309]

II.B.7.b The owner/operator shall not allow visible fugitive dust emissions from haul-road traffic, mobile equipment in operational areas, and fugitive dust sources on site to exceed 20 percent opacity at all times. [R307-309]

- II.B.7.b.1 Visible emission determinations for traffic sources shall use procedures similar to Method 9, as described in the FDCP for the site. The normal requirement for observations to be made at 15-second intervals over a six-minute period, however, shall not apply.

When the Executive Secretary or Executive Secretary's representative is on site to observe opacity, six points, distributed along the length of the haul road or in the operational area, shall be chosen by the Executive Secretary or the Executive Secretary's representative. An opacity reading shall be made at each point when a vehicle passes the selected points. Visible emissions shall be measured at the densest point of the plume but at a point not less than 1/2 vehicle length behind the vehicle and not less than 1/2 the height of the vehicle. The accumulated six readings shall be averaged for the compliance value. [R307-401]
- II.B.7.c The hours of operation for all bulldozers at the facility shall not exceed 24,000 hours of operation combined per rolling 12-month period. [R307-401]
- II.B.7.c.1 To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. Bulldozer hours of operation shall be determined by hour meters installed on the equipment or other appropriate method as established by GRP. [R307-401]
- II.B.7.d Control of surfaces subject to wind erosion shall be required and addressed within the FDCP. [R307-401]
- II.B.7.e A shroud shall be used to control fugitive emission associated with all air compression drilling operations. [R307-401]
- II.B.7.f All paved and unpaved roads and other unpaved operational areas that are used by mobile equipment shall be maintained to control fugitive dust in accordance with the FDCP. The opacity of any haul road, paved or unpaved, shall not exceed 20 percent during all times the areas are in use. Records, as required by the FDCP, of control treatments shall be kept for all periods when the plant is in operation. [R307-401]
- II.B.7.g The storage piles shall be watered to minimize generation of fugitive dust as conditions warrant, as outlined in the FDCP. [R307-401]
- II.B.7.h GRP shall comply with all applicable requirements of R307-309 for PM₁₀ non-attainment areas. To be in compliance, this source must operate in accordance with the most current version of R307-309. [R307-309]
- II.B.8 **All Baghouses and Bin Vents on site shall be subject to the following**
- II.B.8.a The owner/operator shall not allow visible emissions from any baghouse exhaust point (including the asphalt plant) on site to exceed 10 percent opacity. [R307-401]
- II.B.8.b The owner/operator shall not allow visible emissions from any bin-vent exhaust points on site to exceed 10 percent opacity. [R307-401]
- II.B.8.c All displaced air from the asphalt and concrete plants lime, cement, & flyash silos shall pass through a fabric filter device before being vented to the atmosphere. [R307-401]

II.B.9 All Crushers on site shall be subject to the following

- II.B.9.a The owner/operator shall not allow visible emissions from any crusher on site to exceed 10 percent opacity. [R307-401]
- II.B.9.b The owner/operator shall install water sprays or chemical dust suppression sprays on all crusher inlet and outlet points on site to control fugitive emissions. Sprays shall operate whenever conditions warrant, as outlined in the FDCP, or to meet the opacity requirements of this AO. [R307-401]

II.B.10 All Screens on site shall be subject to the following

- II.B.10.a The owner/operator shall not allow visible emissions from any screen on site to exceed 10 percent opacity. [40 CFR 60 Subpart OOO]
- II.B.10.b The owner/operator shall install water sprays or chemical dust suppression sprays on all dry screens on site to control fugitive emissions. Sprays shall operate whenever conditions warrant, as outlined in the FDCP, or to meet the opacity requirements of this AO. [R307-401]

II.B.11 All Conveyors on site shall be subject to the following

- II.B.11.a The owner/operator shall not allow visible emissions from any conveyor transfer point on site to exceed 10 percent opacity. [40 CFR 60 Subpart OOO]
- II.B.11.b The owner/operator shall not allow visible emissions from any conveyor drop point on site to exceed 15 percent opacity. [R307-401]
- II.B.11.c The owner/operator shall install water sprays or chemical dust suppression sprays on all conveyor transfer points on site and all stacker drop points on site to control fugitive emissions. Sprays shall operate whenever conditions warrant, as outlined in the FDCP, or to meet the opacity requirements of this AO. [R307-401]

Section III: APPLICABLE FEDERAL REQUIREMENTS

In addition to the requirements of this AO, all applicable provisions of the following federal programs have been found to apply to this installation. This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including UAC R307.

NSPS (Part 60), OOO: Nonmetallic Mineral Processing Plants
NSPS (Part 60), I: Hot Mix Asphalt Facilities
NSPS (Part 60), A: General Provisions

PERMIT HISTORY

This AO is based on the following documents:

Is Derived From	Administrative Amendment for combining the diesel fuel throughput limitations into one condition dated October 15, 2009
Is Derived From	Administrative Amendment for Diesel Generator Emission Calculation Clarification dated September 8, 2009
Supersedes	DAQE-AN0105650017-09 dated August 5, 2009

ACRONYMS

The following lists commonly used acronyms and their associated translations as they apply to this document:

40 CFR	Title 40 of the Code of Federal Regulations
AO	Approval Order
BACT	Best Available Control Technology
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CDS	Classification Data System (used by EPA to classify sources by size/type)
CEM	Continuous emissions monitor
CEMS	Continuous emissions monitoring system
CFR	Code of Federal Regulations
CO	Carbon monoxide
COM	Continuous opacity monitor
DAQ	Division of Air Quality (typically interchangeable with UDAQ)
DAQE	This is a document tracking code for internal UDAQ use
EPA	Environmental Protection Agency
HAP or HAPs	Hazardous air pollutant(s)
ITA	Intent to Approve
MACT	Maximum Achievable Control Technology
MMBTU	Million British Thermal Units
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOI	Notice of Intent
NO _x	Oxides of nitrogen
NSPS	New Source Performance Standard
NSR	New Source Review
PM ₁₀	Particulate matter less than 10 microns in size
PM _{2.5}	Particulate matter less than 2.5 microns in size
PSD	Prevention of Significant Deterioration
R307	Rules Series 307
R307-401	Rules Series 307 - Section 401
SO ₂	Sulfur dioxide
Title IV	Title IV of the Clean Air Act
Title V	Title V of the Clean Air Act
UAC	Utah Administrative Code
UDAQ	Utah Division of Air Quality (typically interchangeable with DAQ)
VOC	Volatile organic compounds



State of Utah

JON M. HUNTSMAN, JR.
Governor

GARY HERBERT
Lieutenant Governor

Department of Environmental Quality

William J. Sinclair
Acting Executive Director

DIVISION OF AIR QUALITY
Cheryl Heying
Director

DAQE-AN0127760005-09

April 2, 2009

Mike Edwards
Geneva Rock Products, Inc.
1565 West 400 North
P.O. Box 538
Orem, UT 84057

Dear Mr. Edwards:

Re: Approval Order: Approval Order Modification to DAQE-AN2776002-04 for Addition of Aggregate Processing Equipment and Revisions to Increase Aggregate Production and Horsepower-Hours of Operation for Electrical Diesel Generators, Salt Lake County; CDS B; NSPS (Part 60), NSR, PM₁₀ SIP / Maint Plan, Title V (Part 70)
Project Number: N012776-0005

The attached document is the Approval Order for the above-referenced project. Future correspondence on this Approval Order should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. The project engineer for this action is Jon Black, who may be reached at (801) 536-4047.

Sincerely,

M. Cheryl Heying, Executive Secretary
Utah Air Quality Board

MCH:JB:kw

cc: Mike Owens
Salt Lake Valley Health Department

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

APPROVAL ORDER: Approval Order Modification to DAQE-AN2776002-04 for Addition of Aggregate Processing Equipment and Revisions to Increase Aggregate Production and Horsepower-Hours of Operation for Electrical Diesel Generators

**Prepared By: Jon Black, Engineer
Phone: (801) 536-4047
Email: jlblack@utah.gov**

APPROVAL ORDER NUMBER

DAQE-AN0127760005-09

Date: April 2, 2009

Mount Jordan Operations

**Source Contact:
Mr. Mike Edwards
Phone: (801) 281-7890**

**M. Cheryl Heying
Executive Secretary
Utah Air Quality Board**

Abstract

Geneva Rock Products (GRP) submitted a Notice of Intent for a modification to AO DAQE-AN2776002-04 dated May 24, 2004 (Mount Jordan Plant). The proposed modification is for addition of new aggregate processing equipment and revisions to increase aggregate production and diesel generator hours of operation. Geneva Rock's Mount Jordan plant is located at 15800 South 500 West, Bluffdale, Utah in Salt Lake County. Salt Lake County is a non-attainment area of the NAAQS for PM₁₀, SO₂, and a maintenance area for Ozone. NSPS 40 CFR 60 Subparts A and OOO regulations apply to this source. NESHAP and MACT requirements do not apply to this source. Title V of the 1990 Clean Air Act applies to this source. Emissions from this source shall be limited to the following, in tons per year, totals: PM₁₀ - 108.44, PM_{2.5} - 10.21, NO_x - 2.70, SO_x - 0.18, CO - 0.58, VOC - 0.33, HAPs - 0.001.

Under Utah Air Quality Rule R307-403-5: Offsets: PM₁₀ Nonattainment Areas, any increase in combined PM₁₀, SO₂, and NO_x emissions, which exceed 50 tons/year shall obtain offsets at the ratio of 1.2:1 for the emission increase. The potential increase in emission of combined PM₁₀, SO₂, and NO_x emissions for Geneva Rock's proposal is 47.27 tons which requires a total of 47.27 emission offset credits with the 1:1 offset ratio applied. Also, potential emission rates of PM₁₀ do exceed the Major Source threshold of 100 tons/year. Because a large portion of this site consists of fugitive emission sources, and this site is designated as an aggregate plant, GRP's Mount Jordan pit shall be considered a Minor source (See UAC R307-101-2 Definition of Major Source).

This air quality AO authorizes the project with the following conditions and failure to comply with any of the conditions may constitute a violation of this order. This AO is issued to, and applies to the following:

Name of Permittee:

Geneva Rock Products, Inc.
1565 West 400 North
P.O. Box 538
Orem, UT 84057

Permitted Location:

Mount Jordan Operations
Across I-15 from Pt. of Mtn.
Facility on West side
Salt Lake City, UT

UTM coordinates: 422500 m Easting, 4479700 m Northing
SIC code: 1442 (Construction Sand & Gravel)

Section I: GENERAL PROVISIONS

- I.1 All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and 40 CFR. Unless noted otherwise, references cited in these AO conditions refer to those rules. [R307-101]
- I.2 The limits set forth in this AO shall not be exceeded without prior approval. [R307-401]
- I.3 Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved. [R307-401-1]
- I.4 All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's representative upon request, and the records shall include the two-year period prior to the date of

the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of two (2) years. [R307-401]

- I.5 At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded. [R307-401-4]
- I.6 The owner/operator shall comply with R307-150 Series. Inventories, Testing and Monitoring. [R307-150]
- I.7 The owner/operator shall comply with UAC R307-107. General Requirements: Unavoidable Breakdowns. [R307-107]

Section II: SPECIAL PROVISIONS

- II.A The approved installations shall consist of the following equipment:**
 - II.A.1 Mount Jordan Aggregate Processing Plant**
 - II.A.2 Transfer Conveyors**
75-2001 Operation - Miscellaneous Transfer Conveyors with varying capacities
 - II.A.3 Stacker Conveyors**
75-2001 Operation - Miscellaneous Stacker Conveyors with varying capacities
 - II.A.4 Transfer Conveyors**
75-2021 Operation - Miscellaneous Transfer Conveyors with varying capacities
 - II.A.5 Stacker Conveyors**
75-2021 Operation - Miscellaneous Stacker Conveyors with varying capacities
 - II.A.6 Conveyor**
Portable Screening Plant – Conveyor
 - II.A.7 Stacker Conveyor**
Portable Screening Plant - Miscellaneous Stacker Conveyors
 - II.A.8 Crusher - CRU1**
75-2021 Operation - Crusher - 750 tph
 - II.A.9 Diesel Generator**
Diesel Generator - 174 hp

- II.A.10 **Feeder**
75-2001 Operation - 1000 tph
- II.A.11 **Log Washer**
75-2001 Operation - 500 tph
- II.A.12 **Screw Washer - SCW1**
75-2001 Operation - 550 tph
- II.A.13 **Screw Washer - SCW2**
75-2001 Operation - 550 tph
- II.A.14 **Feeder**
75-2021 Operation - 1,500 tph
- II.A.15 **Screw Washer - SCW1**
75-2021 Operation - Screw Washer - 800 tph
- II.A.16 **Screw Washer - SCW2**
75-2021 Operation - Screw Washer - 800 tph
- II.A.17 **Screw Washer - SCW3**
75-2021 Operation - Screw Washer - 800 tph
- II.A.18 **Screw Washer - SCW4**
75-2021 Operation - Screw Washer - 800 tph
- II.A.19 **Classifier**
75-2021 Operation – Classifier
- II.A.20 **Screw Washer - SCW5**
75-2021 Operation - Screw Washer - 800 tph
- II.A.21 **Screw Washer - SCW6**
75-2021 Operation - Screw Washer - 800 tph
- II.A.22 **Grizzly Feeder**
Portable Screening Plant - Grizzly Feeder - 600 tph
- II.A.23 **Wet Screen - WS1**
75-2001 Operation - Wet Screen - 500 tons per hour (tph)
- II.A.24 **Wet Screen - WS2**
75-2001 Operation - Wet Screen - 500 tph
- II.A.25 **Screen - SCR1**
75-2001 Operation - Screen - 1000 tph

- II.A.26 **Wet Screen - WS3**
75-2001 Operation - Wet Screen - 500 tph
- II.A.27 **Screen - SCR1**
75-2021 Operation - Screen - 1500 tph
- II.A.28 **Screen - SCR2**
75-2021 Operation - Screen - 1500 tph
- II.A.29 **Wet Screen - WSC1**
75-2021 Operation - Wet Screen - 750 tph
- II.A.30 **Wet Screen - WSC2**
75-2021 Operation - Wet Screen - 750 tph
- II.A.31 **Wet Screen - WSC3**
75-2021 Operation - Wet Screen - 750 tph
- II.A.32 **Wet Screen - WSC4**
75-2021 Operation - Wet Screen - 750 tph
- II.A.33 **Screen - SCR1**
Portable Screening Plant - 600 tph

II.B Requirements and Limitations

- II.B.1 **The Mount Jordan Plant Shall Operate in Accordance with the Following**
- II.B.1.a The GRP Mount Jordan plant is a State Implementation Plan (SIP) source consisting of the Hansen-Lehi and Mount Jordan pits and is listed in Section IX, Part H, Page 12 of the Salt Lake County SIP. [SIP Section IX.H.2.b]
- II.B.1.b GRP shall notify the Executive Secretary in writing when the installation of the equipment listed in this AO has been completed and is operational. To ensure proper credit when notifying the Executive Secretary, send your correspondence to the Executive Secretary, attn: Compliance Section.

If the construction and/or installation has not been completed within 18 months from the date of this AO, the Executive Secretary shall be notified in writing on the status of the construction and/or installation. At that time, the Executive Secretary shall require documentation of the continuous construction and/or installation of the operation and may revoke the AO. [R307-401]
- II.B.1.c Unless otherwise specified in this AO, visible emissions from the following emission points shall not exceed the following values:
 - A. All crushers - 15% opacity
 - B. All screens - 10% opacity
 - C. All conveyor transfer points - 10% opacity

- D. All diesel engines - 20% opacity
- E. All conveyor drop points - 20% opacity
- F. All other points - 20% opacity. [R307-401]

II.B.1.d The following production limit shall not be exceeded:

Aggregate Production

- A. 3,574,560 tons of processed aggregate production per rolling 12-month period.
- B. 1,000,000 tons of bank run material per rolling 12-month period.

Records of production shall be kept for all periods when the plant is in operation. Production shall be determined by production scales, scale house records, vendor receipts, fuel delivery/usage records and/or any other appropriate mechanism. All bank run material shall be weighed and accounted for prior to leaving the Mount Jordan plant property. The records of production shall be kept on a daily basis. To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months.

Note: Processed is defined as passing through a crushing or screening unit prior to product usage or delivery
[R307-401]

II.B.1.e In addition to the requirements of this AO, all applicable provisions of 40 CFR 60, NSPS Subpart A, 40 CFR 60.1 to 60.18 (General Provisions) and Subpart OOO, 40 CFR 60.670 to 60.676 (Standards of Performance for Nonmetallic Mineral Processing Plants) apply to the affected equipment located at the GRP Mount Jordan pit operation.

To be in compliance, this source must operate in accordance with the most current version of 40 CFR 60 applicable to this source
[R307-401]

II.B.2 **Roads and Fugitive Dust Activities Requirements**

II.B.2.a The hours of operation for all bulldozers at the Mount Jordan plant shall not exceed 10,320 hours combined per rolling 12-month period.

To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. The hours of operation of each bulldozer shall be added together to determine the total hours. Hours of operation shall be determined by supervisor monitoring and maintaining of an operations log. [R307-401]

II.B.2.c Visible fugitive dust emissions from haul-road traffic and mobile equipment in operational areas shall not exceed 20 percent opacity. Visible emission determinations for traffic sources shall use procedures similar to Method 9, as described in the Fugitive Dust Control Plan (FDCP) for the site. The normal requirement for observations to be made at 15-second intervals over a six-minute period, however, shall not apply.

When the Executive Secretary or Executive Secretary's representative is on site to observe opacity, six points, distributed along the length of the haul road or in the operational area, shall be chosen by the Executive Secretary or the Executive Secretary's representative. An opacity reading shall be made at each point when a vehicle passes the selected points. Visible emissions shall be measured at the densest point of the plume but at a point not less than 1/2 vehicle length behind the vehicle and not less than 1/2 the height of the vehicle. The accumulated six readings shall be averaged for the compliance value. [R307-401]

II.B.2.d GRP shall abide by a FDCP acceptable to the Executive Secretary for control of all fugitive dust sources associated with the Mount Jordan plant. GRP shall submit two copies of the FDCP to the Executive Secretary, attention: NSR Section and Compliance Section, for approval. Subsequent updates to the FDCP shall be submitted and approved in accordance with the above stated requirements. GRP shall abide by the most current FDCP approved by the Executive Secretary. The haul road speed shall be posted. [R307-401]

II.B.2.e Control of surfaces subject to wind erosion shall be required and addressed within the FDCP. [R307-401]

II.B.2.f All paved and unpaved roads and other unpaved operational areas that are used by mobile equipment shall be maintained to control fugitive dust in accordance with the FDCP. The opacity of any haul road, paved or unpaved, shall not exceed 20 percent during all times the areas are in use. Records, as required by the FDCP, of control treatments shall be kept for all periods when the plant is in operation. [R307-401]

II.B.2.g Water sprays or chemical dust suppression sprays shall be installed at the following points to control fugitive emissions:

- A. All crusher inlet and outlet points
- B. All dry screens
- C. All dry conveyor transfer and stacker drop points

The sprays shall operate whenever conditions warrant, as outlined in the FDCP, to meet the opacity requirements of this AO.
[R307-401]

II.B.2.h The storage piles shall be watered to minimize generation of fugitive dust as conditions warrant, as outlined in the FDCP. [R307-401]

II.B.2.i GRP shall abide by all applicable requirements of R307-309 for PM₁₀ non-attainment areas. However, to be in compliance, this source must operate in accordance with the most current version of R307-309. [R307-309]

II.B.3 **All On-Site Diesel Fired Equipment**

II.B.3.a The diesel generator usage shall not exceed 174,000 horsepower-hours (hp-hrs) of operation combined per rolling 12-month period.

To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12

months. To determine the total hp-hrs for the facility, the owner/operator shall multiply the horsepower of the engine and the hours operated for that engine and add the total hp-hrs of all the engines together. Hours of operation shall be determined by hour monitors on each engine. [R307-401]

II.B.3.c The owner/operator shall use #1, #2 or a combination of #1 and #2 diesel fuel in all on-site diesel engines. [R307-401-1]

II.B.3.d The sulfur content of any fuel oil or diesel burned shall not exceed:

A. 0.05 percent by weight for diesel fuels consumed in all on-site equipment.

The sulfur content shall be determined by ASTM Method D-4294-89 or approved equivalent. Certification of fuel oil shall be either by GRP's own testing or test reports from the fuel oil marketer. Certification of other fuels shall be either by GRP's own testing or test reports from the fuel marketer.

[R307-401]

Section III: APPLICABLE FEDERAL REQUIREMENTS

In addition to the requirements of this AO, all applicable provisions of the following federal programs have been found to apply to this installation. This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including UAC R307.

NSPS (Part 60), OOO: Nonmetallic Mineral Processing Plnts

NSPS (Part 60), A: General Provisions

PERMIT HISTORY

This AO is based on the following documents:

Is Derived From

Is Derived From

Incorporates

Supersedes

Additional Requested NOI Information dated September 10, 2008

Notice of Intent Document dated July 23, 2008

Emission Credit Order DAQE-088-08 dated November 20, 2008

DAQE-AN2776002-04 dated May 24, 2004

ACRONYMS

The following lists commonly used acronyms and their associated translations as they apply to this document:

40 CFR	Title 40 of the Code of Federal Regulations
AO	Approval Order
ATT	Attainment Area
BACT	Best Available Control Technology
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CDS	Classification Data System (used by EPA to classify sources by size/type)
CEM	Continuous emissions monitor
CEMS	Continuous emissions monitoring system
CFR	Code of Federal Regulations
CO	Carbon monoxide
COM	Continuous opacity monitor
DAQ	Division of Air Quality (typically interchangeable with UDAQ)
DAQE	This is a document tracking code for internal UDAQ use
EPA	Environmental Protection Agency
HAP or HAPs	Hazardous air pollutant(s)
ITA	Intent to Approve
MACT	Maximum Achievable Control Technology
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOI	Notice of Intent
NO _x	Oxides of nitrogen
NSPS	New Source Performance Standard
NSR	New Source Review
PM ₁₀	Particulate matter less than 10 microns in size
PM _{2.5}	Particulate matter less than 2.5 microns in size
PSD	Prevention of Significant Deterioration
R307	Rules Series 307
R307-401	Rules Series 307 - Section 401
SO ₂	Sulfur dioxide
Title IV	Title IV of the Clean Air Act
Title V	Title V of the Clean Air Act
UAC	Utah Administrative Code
UDAQ	Utah Division of Air Quality (typically interchangeable with DAQ)
VOC	Volatile organic compounds

2.2.P Geneva Rock Products, Inc - (Point of the Mountain Pit)

1. The approved installations shall consist of only the following equipment:

A. In the Hansen Pit

1. The L-4 Crushing Plant:

Triple Deck Eljay Screen (#34L1079)
45 inch Eljay Cone Crusher (#22G0690)
Eljay 6' X 16' Wash Screen (#34J0385)
Associated Conveyors
Two (2) Front End Loaders

2. The G-4 Cement Batch Plant:

Ross model 135 Batch Plant (#135-32)
Ross model V200 600 CFM Bin Vent (cement silo)
Todd model 36-SK 600 CFM Bin Vent (flyash silo)
One Front End Loader

B. In the North Hansen Pit

1. The L-3 Portable Crushing Plant:

Cedarapids Jaw Crusher/Screen Deck (#21447)
Eljay Cone Crusher/Screen Deck (#42A0278)
Associated Conveyors

One bulldozer
Two front End Loaders
One generator

2. The L-5 Portable Crushing Plant:

Cedarapids Screen/Jaw/Rolls unit (#13385)
Eljay 4' X 12' Wet Screen Deck
Associated Conveyors
Two Front End Loaders
Two Generators

3. Additional Equipment:

45 inch Eljay Cone Crusher (41J0581)
Eljay 5' X 16' Screen Deck (#34D1481)
Universal Rolls (#207X46)
One Generator
Cedarapids Jaw Crusher (#21480)
One Bulldozer
One Loader

4. The F-1 Hot Plant:

Todd Model 36-DK 600 CFM Bin Vent (Lime Silo)
CMI Oil Fired Drum Mix Asphalt Plant with Venturi
Scrubber (#UVM-1700)
One Front End Loader

C. In the Mount Jordan Pit

1. The L-1 Crushing Plant:

Eljay 5' X 16' Screen Deck (#34L0277)
Eljay 45" Cone Crusher (#533)
Eljay 5' X 16' Wet Screen Deck (#34J0783)
Eljay 5' X 16' Wet Screen Deck (#34E0984)
Associated Conveyors
Two Front End Loader

2. Emissions to the atmosphere from the indicated emission point shall not exceed the following rates and concentrations:

A. The CMI Asphalt Plant

1.	PM ₁₀	3.34 lbs/hr	0.024 grains/dscf (Virgin)
2.	PM ₁₀	3.90 lbs/hr	0.028 grains/dscf (Recycle)
3.	SO ₂	18.72 lbs/hr	118 ppmv

Stack testing to show compliance with the above emissions limits shall be performed in accordance with paragraph 2.1.A and every three years thereafter.

3. Water sprays or chemical dust suppression sprays shall be installed at the following points to control fugitive emissions:

- A. All crushers
- B. All screens
- C. All conveyor transfer points

The sprays shall operate to the extent necessary to keep the equipment operation within the opacity limitation of 10%.

4. Water shall be added to the mined material (to be bulldozed) such that before the material is moved, its moisture content, as determined by ASTM Method D-2216 on the -40 mesh portion of the sample, is greater than 4.0% by weight. This moisture content shall be maintained

throughout subsequent crushing, screening and conveying circuits. The silt content of the product shall not exceed 15% by weight on a daily average without prior approval in accordance with Section 3.1, UACR. The moisture and silt content shall be tested if directed by the Executive Secretary using the appropriate ASTM method.

5. The following production limits shall not be exceeded without prior approval in accordance with Section 3.1, UACR:

- A. For the Asphalt Plant:

1. 285 tons/hr
2. 250,000 tons/yr

- B. For the Concrete Batch Plant:

1. 100 cubic yards/hr
2. 200,000 cubic yards/yr

- C. For the Aggregate Pits:

1. 900 tons/hr of crushing/screening production
2. 1,000,000 tons of mined material per year
3. 2,000 hours of operation per unit per year

Asphalt, concrete and pit production shall be determined through the use of weigh scales and recording of the weights. The records shall be kept on a daily basis. Hours of operation shall be determined by supervisor monitoring and maintaining an operations log.

6. The batcher unit on the Ross Plant shall be enclosed in a building as proposed in the notice of intent dated September 4, 1984, and the loading process from the discharge hopper into the mixer trucks shall be controlled by an adjustable boot.
7. The cement and flyash silos shall be pneumatically loaded. The displaced air from the silos generated during filling shall be passed through a baghouse. The flow rate through the baghouse shall not exceed 600 ACFM. The baghouse flow rate shall be measured at the request of the Executive Secretary. The method shall be 40 CFR 60, Appendix A, Method 2.
8. For the asphalt plant, the following operating parameters shall be maintained within the indicated ranges:
 - A. Pressure drop across the venturi scrubber - 15" nominal, 13" w.g. minimum

- B. Scrubber liquid flow rate - 300 gallons per minute nominal, 275 gpm minimum 225 gpm

They shall be monitored with equipment located such that an inspector can at any time safely read the output. The readings shall be accurate to within the following ranges:

- A. Plus or minus 1.0 inch w.c.
B. Plus or minus 15 gpm

All instruments shall be calibrated against a primary standard at least once every 90 days. The primary standard shall be specified by the Executive Secretary.

9. Under no circumstances shall the percent by weight of recycle asphalt exceed 50%.
10. The owner/operator shall use only Number 2 fuel oil or better as fuel or other fuel that can demonstrate sulfur content of less than 0.45% (less than 0.05% after December 1993) by weight. If any other fuel is to be used, an approval order shall be required in accordance with Section 3.1, UACR. The sulfur content of any fuel oil burned shall not exceed 0.45% by weight as determined by ASTM Method D-4294-89 or, as appropriate, the sulfur content of any fuel oil burned shall not exceed 0.25 pounds of sulfur per million BTU heat input as determined by ASTM Method D-4294-89. The sulfur content shall be tested if directed by the Executive Secretary. Fuel consumption shall be determined by examination of vendor sales receipts which shall be maintained for two years. These records shall be made available to the Executive Secretary upon request.
11. The open disturbed area shall not exceed 150 acres without prior approval from the Executive Secretary.
12. The storage piles shall be watered to minimize generation of fugitive dusts as dry conditions warrant or as determined necessary by the Executive Secretary. The total acreage of the storage piles shall not exceed 75 acres.
13. All installations and facilities authorized by this subsection shall be adequately and properly maintained.
14. Annual emissions for this source (the entire plant) are hereby established at 81.0 tons/yr for PM_{10} , 9.64 tons/yr for SO_2 , 21.4 tons/yr for NO_x .

e. GENEVA ROCK PRODUCTS, POINT OF THE MOUNTAIN (Hansen Pit and Mount Jordan Pit)

- (1) PM₁₀ emissions from the Asphalt Plant Baghouse Stack (APBH) shall not exceed 0.127 tons per day.

Compliance with the daily mass emission limits shall be demonstrated by multiplying the most recent stack test results, along with any necessary conversion factors, by the appropriate hours of operation for each day. Hours of operation shall be determined by supervisor monitoring and maintaining an operations log.

- (2) Stack testing shall be performed as specified below:

<i>POLLUTANT</i>	<i>TEST FREQUENCY</i>
PM ₁₀ (virgin materials)	5 years
PM ₁₀ (recycle asphalt)	3 years

When testing for PM₁₀ emissions during manufacture of recycle asphalt, recycle asphalt shall be introduced into the plant at a rate no less than 45% of the plant production

- (3) Visible emissions from the following emission points shall not exceed the following values:

- (a) All crushers - 10% opacity
- (b) All screens - 10% opacity
- (c) All conveyor transfer points - 10% opacity
- (d) Conveyor drop points - 15% opacity

- (4) The following production limits are the combined totals for the Hansen Pit and the Mount Jordan Pit:

(a) *ASPHALT PLANT*

- (i) 500 tons of asphalt produced per hour (averaged over each operating day).
- (ii) 50% recycle asphalt used in the manufacture of asphalt (averaged over each operating shift).

(b) *CONCRETE BATCH PLANT*

2,400 cubic yards of concrete produced per 24-hour period.

(c) *AGGREGATE PITS*

37,944 tons per 24-hour period of aggregate crushing and screening production.

RACI/RACM

	Control	Technical Feasibility	Emission Efficiency/ Rate	Reference	Costs: Environmental, Energy, & Economical		Notes/ References
Haul Roads	Control	Not feasible in steep terrain	0.000021 lb/ton	AP-42 11.19.2.2 w/ 15% of TPM	\$570 /ft (yr ²)	\$570 /ft-year	Control is covered
	Replace w/ Controlled Conveyors	Not feasible in steep terrain	0.00045 lb/ton	AP-42 11.19.2.2 w/ 15% of TPM	\$500 /ft (yr ²)	\$500 /ft-year	
	Paving w/ Water flush application	Not feasible in mining/storage pile areas	95% DAC Road Guidance Memo 11-3-08		\$184.50 /ft-year	\$184.50 /ft-year	
	Paving w/ Water spray application	Not feasible in mining/storage pile areas	95% DAC Road Guidance Memo 11-3-08		\$294 /ft-year	\$294 /ft-year	
	Paving w/ Vacuum sweeping	Not feasible in mining/storage pile areas	95% DAC Road Guidance Memo 11-3-08		\$75 /ft-year	\$75 /ft-year	
Loader Routes	Truck Wash Stations (trackout)	These are a maintenance nightmare					No roadbase Very Costly
	Chemical applications						
	MgCl						
	Watering & Road Base						
	Watering						
Storage Piles	No Control	Not feasible in steep terrain	0.211 lb/VMT	AP-42 13.2.2 w/ S = 4.8 & W = 40	\$570 /ft (yr ²)	\$570 /ft-year	
	Replace w/ Controlled Conveyors	Not feasible in steep terrain	0.00045 lb/ton	AP-42 11.19.2.2 w/ 15% of TPM	\$500 /ft (yr ²)	\$500 /ft-year	
	Paving w/ Water flush application	Not feasible in mining/storage pile areas	95% DAC Road Guidance Memo 11-3-08		\$184.50 /ft-year	\$184.50 /ft-year	
	Paving w/ Water spray application	Not feasible in mining/storage pile areas	95% DAC Road Guidance Memo 11-3-08		\$294 /ft-year	\$294 /ft-year	
	Paving w/ Vacuum sweeping	Not feasible in mining/storage pile areas	95% DAC Road Guidance Memo 11-3-08		\$75 /ft-year	\$75 /ft-year	
Exposed Areas	Chemical applications						
	MgCl						
	Watering & Road Base						
	Watering						
	No Control						
Aggregate Processing Equipment (Crushers, Screens, Conveyors, etc.)	Full Enclosures w/ Control Device						
	Partial Enclosures						
	Wind Breaks						
	Chemical Suppressants						
	Spray water						
Concrete Batch Plants	No Control	May not be feasible if product quality is affected?	40% AP-42 Appendix B 2.4 Table B 2-3		varies greatly		
	Paving		1.98 lb/acre-day	AP-42 4th ed 8.19.1.1 w/ 15% of TSP	\$1.50 per sq/ft = \$65,340	\$65,340 /acre-year	
	Vegetation				\$5500 per acre	\$5,500 /acre-year	
	Chemical Suppressants				\$1.00 per sq/ft = \$43,560	\$43,560 /acre-year	
	MgCl				\$1.00 per sq/ft = \$4,356 /ft	\$4,356 /acre-year	
Aggregate Processing Equipment (Crushers, Screens, Conveyors, etc.)	Water Cannons (to avoid water truck travel)		40% AP-42 Appendix B 2.4 Table B 2-3		\$0.01 per sq/ft per day = \$	\$159,000 /acre-year	
	Spray water		40% AP-42 Appendix B 2.4 Table B 2-3		\$0.01 per sq/ft per day = \$	\$159,000 /acre-year	
	No Control		0.057 tons/acre-yr	AP-42 11.9.4 w/ 15% TSP			
	Control Device at each emission point						
	Baghouse		99% AP-42 Appendix B 2.4 Table B 2-3				
Concrete Batch Plants	-ESP (Electrostatic Precipitator)		95% AP-42 Appendix B 2.4 Table B 2-3				
	-Wet Scrubber		90% AP-42 Appendix B 2.4 Table B 2-3				
	-Cyclones		80% AP-42 Appendix B 2.4 Table B 2-3				
	-Spray water		40% AP-42 Appendix B 2.4 Table B 2-3				
	Partial Enclosures		1.5% AP-42 Appendix B 2.4 Table B 2-3				
Aggregate Processing Equipment (Crushers, Screens, Conveyors, etc.)	-Water Mists/Spray Foggers		40% AP-42 Appendix B 2.4 Table B 2-3				
	-Curtains		1.5% AP-42 Appendix B 2.4 Table B 2-3				
	Enclosure w/ Universal Control Device						
	-Baghouse		99% AP-42 Appendix B 2.4 Table B 2-3				
	-ESP		95% AP-42 Appendix B 2.4 Table B 2-3				
Concrete Batch Plants	-Wet Scrubber		90% AP-42 Appendix B 2.4 Table B 2-3				
	-Cyclones		80% AP-42 Appendix B 2.4 Table B 2-3				
	Baghouse		99% AP-42 Appendix B 2.4 Table B 2-3				
	Bin Vents		95% AP-42 Appendix B 2.4 Table B 2-3				
	ESP		90% AP-42 Appendix B 2.4 Table B 2-3				
Concrete Batch Plants	Wet Scrubber		90% AP-42 Appendix B 2.4 Table B 2-3				
	Cyclones		80% AP-42 Appendix B 2.4 Table B 2-3				
	Water Sprays		40% AP-42 Appendix B 2.4 Table B 2-3				
	Chute Extensions (truck loading if applicable)						
	Not feasible with Cement & Additive						

Asphalt Plant	PM2.5 Controls								
	-Baghouse								
	-ESP								
	-Wet Scrubber								
	-Cyclones								
	-Water suppression sprays								
	NOx Controls	Not feasible since product must be dry.							
	-Low NOx Burners								
	-Ultra Low NOx Burners								
	-Flue Gas Recirculation (FGR)								
	-Low NOx Burners & FGR								
	-SCR (Selective Catalytic Reduction)(metal)								
	-SNCR (Selective Noncatalytic Reduction)(NH3)								
	SO2 Controls								
	-Wet Scrubber								
Diesel Stand-by Generator	HMA Storage Silos (See VOC Controls)								
	Fuel/Asphalt Storage Tanks (See VOC Controls)								
	VOC Controls								
	-Oxidation Catalyst								
	-Thermal Oxidizer (flare)								
	-Adsorbents (carbon)								
	-Absorbents (scrubber)								
	Fuel (NOx, SO2 & VOC)								
	Natural Gas/Propane								
	Fuel Oil								
	-Waste Oil								
	*Sulfur Content (15 ppm)								
	*Sulfur Content (0.05%)								
	*Sulfur Content (0.5%)								
	*Sulfur Content (0.85 lb/MMBTU) (R307-203-1(1))								
Tier I									
Tier II									
Tier III									
Tier IV									
Uncontrolled (AP-42)									
Other Sulfur contents not allowed by NSPS									

Disturbed Ground/Exposed Areas

\$/acre-year	Control Efficiency	EF (tons/yr-acre)		Cost (\$/Ton)
		PM10	PM2.5	
\$0 Uncontrolled	0%	0.19	0.057	\$0
\$159,000 Water	40%	0.114	0.0342	\$6,973,684
\$4,356 MgCl	50%	0.095	0.0285	\$152,842
\$43,560 Chemicals	50%	0.095	0.0285	\$1,528,421
\$5,500 Vegetation	95%	0.0095	0.00285	\$101,570
\$65,340 Paving	100%	0	0	\$1,146,316

Apply water and other controls as needed to ensure opacity does not exceed 20% onsite and 10% at the property boundary.

Based on current R307-309 rules.

Storage Piles

\$/acre-year	Control Efficiency	EF (lb/acre-day)		Emissions (tpy/acre)		Cost (\$/Ton)
		PM10	PM2.5	PM10	PM2.5	PM2.5
\$0 Uncontrolled	0%	6.3	1.98	1.14975	0.36135	\$0
\$159,000 Water	40%	3.78	1.188	0.68985	0.21681	\$1,100,042
\$4,356 MgCl	50%	3.15	0.99	0.574875	0.180675	\$24,110
\$43,560 Chemicals	50%	3.15	0.99	0.574875	0.180675	\$241,096

Apply water and other controls as needed to ensure opacity does not exceed 20% onsite and 10% at the property boundary.

Based on current R307-309 rules.

Haul Roads

Production Schedule

8,000,000 Tons/year
400 Tons/hour

2-Lane Road
Road Base \$150,000 /mile (30% of total)
HMA \$350,000 /mile (70% of total)
Total \$500,000 /mile

Averaging Period

5 years
10% interest rate

60' x 30" conveyor
60 ft
\$30,000 /60' conveyor
\$500 /ft
\$2,640,000 /mile
88 transfers/mile

Road Base		Paving		Conveyors	
Capital Cost	\$150,000 \$/mile	\$500,000 \$/mile	\$2,640,000 \$/mile		
Interest	\$41,498 \$/mile	\$137,412 \$/mile	\$246,680 \$/mile		
Average Annual Cost	\$38,300 \$/mile	\$127,482 \$/mile	\$577,336 \$/mile		
	\$38,300 \$/road	\$/road	\$577,336 \$/road		

Base		Paving		Conveyor	
Production (tons)		Cents/ton/mile		Cents/ton/mile	Emissions tons/yr
3,000,000	1.3	0.5	4.2	19.2	3.96
8,000,000	0.5	0.1	1.6	7.2	5.27
40,000,000	0.1	0.3	1.4		3.63

BACT cost per ton	\$5,000 \$/ton	@ \$9,000
Road Base cost per ton	\$1,803 \$/ton	1,610,000 Tons/year
Paving cost per ton	\$4,624 \$/ton	4,150,000 Tons/year
Conveying cost per ton	\$19,136 \$/ton	- Tons/year

@ \$5,000
2,900,000 Tons/year
7,500,000 Tons/year
- Tons/year

@ \$1,500
9,500,000 Tons/year
- Tons/year
- Tons/year

Aggregate	Vehicle		Load		Total		Average		Trips/Year	Trips/Hour	Length of Road (feet)	Length of Road (miles)	Yearly Distance (miles)	Hourly Distance (miles)
	Weight	20	Weight	40	Weight	60	Weight	40						
									200000	10	5280	1.00	400000	20

$$E = k \left(\frac{s}{12} \right)^a \times \left(\frac{W}{3} \right)^b$$

AP-42 13.2.2.4 equation # 1a

$$E_{ext} = E \left[\frac{(365 - P)}{365} \right]$$

correction factor for "wet" days

Size Range	k	a	b
PM _{2.5}	0.15	0.9	0.45
PM ₁₀	1.5	0.9	0.45

Table 13.2.2-2
E = size-specific emission factor (lb/VMT)
empirical constants
surface material silt content (%)
W = mean vehicle weight (tons)
number of "wet" days (used only with uncontrolled factor)

	Control Efficiency (%)	Emissions Factor		Hourly		Yearly		Reduction Differential		Cost Differential	
		E _{2.5}	E ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	(Tons)	(Tons)	(\$/mile)	(\$/mile)
No Control	0%	0.159	1.59	3.179	31.79	31.79	317.86	0.00	-	\$0	-
Basic Watering	70%	0.211	2.11	1.266	12.66	12.66	126.57	19.13	19.13	\$38,300	\$38,300
Basic Watering & Road Base	75%	0.211	2.11	1.055	10.55	10.55	105.47	21.24	2.11	\$38,300	\$38,300
Chemical Suppressant & Watering	85%	0.211	2.11	0.633	6.33	6.33	63.28	25.46	4.22	\$127,482	\$89,183
Paving + Sweeping & Watering	90%	0.211	2.11	0.422	4.22	4.22	42.19	27.57	2.11	\$127,482	\$89,183
Paving + Vacuum-Sweeping & Watering	95%	0.211	2.11	0.211	2.11	2.11	21.09	29.68	2.11	\$577,336	\$449,854
Conveying	96.2%	4.60E-06	4.60E-05	0.162	1.619	1.62	16.192	30.17	0.49	\$577,336	\$449,854

Loader Routes

Production Schedule

6,000,000 Tons/year
400 Tons/hour

2-Lane Road
Road Base \$150,000 /mile (30% of total)
HMA \$350,000 /mile (70% of total)
Total \$500,000 /mile

60' x 30" conveyor
60 ft

\$30,000 /60' conveyor
\$500 /ft

Mag Chloride

0.5 gallons/yd²
30% solution

Averaging Period

5 years
10% interest rate

Road Base

Capital Cost \$150,000 \$/mile
Interest \$41,498 \$/mile
Average Annual Cost \$38,300 \$/mile
\$38,300 \$/road

Paving

\$500,000 \$/mile
\$137,412 \$/mile
\$127,482 \$/mile
\$/road

Conveyors

\$2,640,000 \$/mile
\$246,680 \$/mile
\$577,336 \$/mile
\$/road

Production

800,000 (tons)
2,000,000
8,000,000

Base

Cents/ton/mile
4.8
1.9
0.5

Paving

Cents/ton/mile
15.9
6.4
1.6

Conveyor

Cents/ton/mile
72.2
28.9
7.2

Emissions

tons/yr
9.93
13.21
2.42

BACT cost per ton \$5,000 \$/ton
Road Base cost per ton \$/ton
Paving cost per ton \$/ton
Conveying cost per ton \$/ton

@ \$9,000
430,000 Tons/year
1,100,000 Tons/year
4,250,000 Tons/year

@ \$5,000
770,000 Tons/year
2,000,000 Tons/year
7,900,000 Tons/year

@ \$1,500
2,500,000 Tons/year
6,500,000 Tons/year
Tons/year

Vehicle Load
Weight Weight
30 10

Total Average
Weight Weight
40 35

Trips/Year Trips/Hour
800000 40

Length of Road (feet)
5280

Length of Road (miles)
1.00

Yearly Distance (miles)
1600000

Hourly Distance (miles)
80

$$E = k \left(\frac{s}{12} \right)^a \times \left(\frac{W}{3} \right)^b$$

AP-42 13.2.2.4 equation # 1a

$$E_{wet} = E \left[\frac{(365 - P)}{365} \right]$$

Table 13.2.2-2

Size Range	k	a	b
PM _{2.5}	0.15	0.9	0.45
PM ₁₀	1.5	0.9	0.45

E = size-specific emission factor (lb/VMT)
k, a, b = empirical constants
W = surface material silt content (%)
mean vehicle weight (tons)
number of "wet" days (used only with uncontrolled factor)

correction factor for "wet" days

Control Efficiency (%)	Emissions Factor E _{2.5}	E ₁₀	Hourly PM _{2.5}	PM ₁₀	Yearly PM _{2.5}	PM ₁₀	Reduction Differential (Tons)	Differential (\$/mile)	Cost (\$/mile)	Differential (\$/mile)
No Control	0%	0.150	1.50	11.973	119.73	1197.29	0.00	-	\$0	-
Basic Watering	70%	0.199	1.99	4.767	47.67	476.74	72.06	72.06	\$38,300	\$38,300
Basic Watering & Road Base	75%	0.199	1.99	3.973	39.73	397.28	80.00	7.95	\$127,482	\$89,183
Chemical Suppressant & Watering	85%	0.199	1.99	2.384	23.84	238.37	95.89	15.89	\$127,482	\$89,183
Paving + Sweeping & Watering	90%	0.199	1.99	1.589	15.89	158.91	102.84	7.95	\$127,482	\$89,183
Paving + Vacuum-Sweeping & Watering	95%	0.199	1.99	0.795	7.95	79.46	111.78	7.95	\$127,482	\$89,183
Conveying	99.0%	4.60E-06	4.60E-05	0.162	1.619	16.192	116.11	6.33	\$577,336	\$449,854

Aggregate Processing Equipment

2,500,000 Tons Produced/Year

3 Crushers
4 Screens
20 Conveyors

Annualized Capital & Operating Costs
\$100,000 Endclosure & Baghouse
- Based on 2006 UDOT Permit

Cost per Ton Produced
\$0.32 for 2,500,000 tons per year

	PM10 EF (lb/ton)			PM2.5 EF (lb/ton)			Control Efficiency	(lb/ton)		(Tons/year)		(\$/Ton)		Incr. (\$/ton)
	Crusher	Screen	Conveyor	Crusher	Screen	Conveyor		PM10	PM2.5	PM10	PM2.5	PM10	PM2.5	
\$0 Uncontrolled	0.0024	0.0087	0.0011	0.00072	0.00261	0.00033	0%	0.064	0.0192	80	24	\$0	\$0	
\$15,000 Water	0.00054	0.00074	0.000046	0.0001	0.00005	0.000013	96%	0.0055	0.00076	6.875	0.95	\$651	\$651	
\$33,670 Baghouse	0.000024	8.7E-05	0.000011	7.2E-06	0.0000261	3.3E-06	99%	0.00064	0.000192	0.8	0.24	\$33,670	\$1,105,634	

Emissions from unenclosed crushers shall not exceed 12% opacity.

Emissions from unenclosed screens shall not exceed 7% opacity.

Emissions from unenclosed conveyor transfer points shall not exceed 7% opacity.

Emissions from baghouses shall not exceed 7% opacity.

NSPS Subpart OOO Limits for 'new' equipment.

Utah Aggregate Processing Equipment PM 2.5 / PM10 BACT-RACT analysis

The Utah Associated General Contractors Environmental Committee reviewed the BACT-RACT analysis of potential control measures for aggregate processing equipment as proposed by Utah Division of Air Quality. Three tiered control strategies were identified: uncontrolled, controlled with water sprays and controlled with baghouses. The controls were applied to three types different processes including crushing, screening and conveying of construction aggregates. A "typical" aggregate processing operation layout was generated from a September 2006 UDOT Notice of Intent for an aggregate mining operation to be located at 875 South Frontage Road, City of North Salt Lake, Utah. The layout included 3 crushers, 4 screens and 20 conveyors with a maximum annual production rate of 2.5 million tons per year. Emissions for PM10 and PM2.5 were calculated using the most recent factors from AP-42 Chapter 11 Mineral Products Industries.

Uncontrolled emissions for crushing, screening and conveying were calculated as a baseline. Emissions were estimated at 80 Tons per Year (TPY) PM10 and 24 TPY PM2.5, with no cost for controls. A second emissions tier was estimated using water sprays as control measures. Emissions were estimated at 6.875 TPY PM10 and 0.95 TPY PM2.5. Water sprays are estimated to have a control efficiency of 96%, with a \$651 cost per ton of PM2.5 controlled. Costs for water spray controls were obtained as general numbers from AGC members.

A third emissions tier was estimated using baghouses as control measures. Emissions were estimated at 0.8 TPY PM10 and 0.24 TPY PM2.5. Applying baghouse controls yields an additional 3% control efficiency over water sprays alone. Several factors were taken into account when identifying a cost associated with utilizing baghouses : initial equipment cost, installation and additional infrastructure cost, annual operating and maintenance cost, cost of lost production due to increased downtime (ie removal of control structures to access processing equipment for maintenance and repair), and increased emissions from additional power generating equipment to run the baghouses. The cost of installing, operating and maintaining baghouse controls was estimated at \$33,670 per ton of PM2.5 controlled, an increase of 51 times the cost to control an additional 3% of emissions.

More significant that the increased incremental cost is the increased emissions from power generating equipment required to operate the additional controls. At a rate of 2600 hours per year (per the UDOT NOI), a generator with sufficient capacity to operate the additional baghouse controls is estimated to emit 0.45 tons of PM10, 3.15 tons of SOx and 10.14 tons of NOx. Assuming worst case that all estimated PM10 emissions are actually PM2.5 fraction, the emissions from the power generating equipment required to operate the additional baghouse controls nearly negates any benefit from the addition of baghouse controls.

Based on this analysis, installation of baghouse controls over water spray controls yield very little emissions control benefit while incurring significant initial and ongoing costs to the aggregate producer.

At this point, it is important to note a few facts about the 2006 UDOT Notice of Intent (NOI) that was the model for installation of baghouses on aggregate processing plants: 1) The NOI stated that the baghouses had not been designed or fabricated at the time of the submittal. 2) The NOI acknowledges

that the BACT calculation for the purpose of the NOI indicates BACT for Mineral Processing is water spray control, and that installation and operation of baghouse controls significantly exceeded the cost per ton of pollutant that UDAQ deemed reasonable at the time of the permit application. 3) The application was written to include the highest degree of control technologically feasible with no regard to economic feasibility. 4) The BACT analysis for the NOI indicated that baghouse controls require 50 times more power per year than water sprays alone. No accounting was made for the increased emissions from power generating equipment required to operate the baghouse controls. 5) The aggregate processing plant detailed in the NOI was never constructed or operated.

40 CFR Part 60

[EPA-HQ-OAR-2007-1018; FRL-8896-7]
RIN 2060-AO41

New Source Performance Standards Review for Nonmetallic Mineral Processing Plants; and Amendment to Subpart UUU Applicability

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

IV. Summary of Significant Comments and Responses on Subpart OOO

B. Emission Limits

Comment: Commenters questioned the basis for revising the emission limits because the technology representing BDT has not changed. The commenters argued that EPA is taking away the margin of compliance available for facilities using the identified NSPS technologies. Several commenters objected to the proposed stack PM limit of 0.014 gr/dscf and questioned the basis for the revision. Some commenters agreed with the conclusion that setting a PM limit below 0.014 gr/dscf could result in a level of control that may be difficult to continually achieve.

Many commenters questioned the technical reasons for reducing the fugitive emission limits from 15 to 12 percent opacity for crushers and from 10 to 7 percent opacity for other affected facilities. Some commenters questioned if reducing the fugitive emission limits is necessary, given EPA's conclusion that the potential benefits cannot be quantified and are likely to be similar to the current standard. Commenters were particularly concerned with the proposed 7 percent fugitive opacity limit and stated that an opacity standard within the 7.5 percent positive error of Method 9 is basically a "no VE" standard. Two commenters referred to Method 9 error as high as 14 percent in the document "Air Pollution Control Techniques for Non-Metallic Minerals Industry" (EPA-450/3-82-014, August 1982). Other commenters noted that it would make more sense for the limits to be in increments of 5 percent since this is how opacity is read. The commenters supported basing compliance on the average of the five 6-minute averages collected during the 30-minute opacity test. Two commenters supported the proposed fugitive emission limits.

Response: Section 111 of the CAA requires that NSPS reflect the application of the best system of emission reductions which (taking into consideration the cost of achieving such emission reductions, any non-air quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated. This level of control is commonly referred to as BDT. Section 111(b)(1)(B) of the CAA requires EPA to periodically review and revise the standards of performance, as necessary, to reflect improvements in methods for reducing emissions. The subpart OOO emission limits were established with the 1983 proposal and 1985 promulgation of subpart OOO, based on review of the performance of technology and emissions data collected in the late 1970s. The emission limits have not been reevaluated based on actual emissions testing in over 20 years because the first action taken with respect to the NMPP NSPS, completed on June 9, 1997 (62 FR 31351), considered provisions other than the emission limits.

For purposes of this (2008-2009) NSPS review, we reviewed more recent actual emissions data from hundreds of emissions tests conducted on a variety of subpart OOO affected facilities in many NMPP industries (EPA-HQ-OAR-2007-1018-0085). These data revealed that the vast majority of affected facilities perform substantially better than the current subpart OOO emission limits. Therefore, we determined that it was appropriate in this NSPS review to reduce the subpart OOO emission limits for affected facilities commencing construction, modification, or reconstruction on or after April 22, 2008. Further, because the majority of existing affected facilities for which we have data meet the revised standards (as discussed below), EPA concludes that all new affected facilities should also be able to achieve them.

For affected facilities commencing construction, modification, or reconstruction on or after April 22, 2008, we are retaining (as proposed) the stack emission limit of 0.014 gr/dscf and we are replacing the associated 7 percent stack opacity limit with a continuous monitoring requirement. For affected facilities commencing construction, modification, or reconstruction on or after April 22, 2008, we are promulgating the proposed fugitive emission limits of 12 percent opacity for crushers without capture systems and 7 percent opacity for all other types of affected facilities with fugitive emissions (including fugitive emissions from grinding mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading stations, and any other affected facility).

The stack emissions data we reviewed to set the revised limits included over 300 PM stack tests from 1990 and later. Ninety-one percent of the PM stack test results achieved 0.014 gr/dscf or lower. The control devices used for the affected facilities tested included primarily baghouses and wet scrubbers. In addition, we reviewed more than 700 fugitive emissions tests. For crushers without capture systems, 98 percent of the fugitive emissions test averages were at or below 12 percent opacity and 99 percent of the fugitive emissions test averages for other types of affected facilities were at or below 7 percent opacity. The fugitive emission limits are most commonly met through use of wet suppression (as needed), water carryover, or with a partial enclosure. Affected facilities that commence construction, modification, or reconstruction on or after April 22, 2008, can employ the same control devices or fugitive emission reduction measures for which test data were reviewed to meet the revised emission limits, except that the small fraction of marginally performing controls would no longer be acceptable for new, modified, or reconstructed affected facilities. The small fraction of existing marginally performing controls can be represented by the fraction of test data above the revised emission limits (i.e., less than 10 percent of data, including data from controls that failed to meet the original NSPS limits but were later retested and met the limits). Such controls will no longer be acceptable for new, modified, or reconstructed affected facilities. This is consistent with the goal of NSPS review to reflect improvements in methods for reducing emissions. In short, because the vast majority of existing affected facilities for which we have data are achieving these revised standards, EPA has concluded that all new affected facilities should be able to achieve these revised standards as well. We have no reason to believe that new affected facilities could not meet the revised standards.

We disagree with assertions that the revised limits erase any margin for error or fail to account for variability. To the contrary, significant percentages of the test data achieved substantially lower limits than are being promulgated for subpart OOO. Thus, a workable compliance margin and provision for variability remains.

The emission reduction associated with lowering the fugitive emission limits is not quantifiable because no reduction in mass emission rate can be determined from opacity measurements. However, that does not mean that there is no environmental benefit. The environmental benefit is that higher emissions from marginally performing controls (as described above) will no longer be acceptable for fugitive emissions from affected facilities that commence construction, modification, or reconstruction on or after April 22, 2008.

Although opacity is read in 5 percent increments, the test average resulting from averaging the opacity observations is not limited to increments of 5 percent opacity. In addition to reducing the fugitive opacity limits, we are also specifying in Sec. 60.675(c)(3) that the duration of the Method 9 observations must be 30 minutes (five 6-minute averages) and that compliance with the fugitive emission limits must be based on the average of the five 6-minute averages (which is equivalent to the test average). Commenters unanimously supported this averaging procedure.

Regarding the 7.5 percent error mentioned in Method 9 and the 14 percent error reflected in EPA-450/3-82-014, we note that these error values are based on 6-minute average opacity results and represent exceptions rather than norms. Therefore, we disagree that setting an opacity standard below 7.5 percent is equivalent to establishing a "no visible emission" standard. We further note that the averaging procedure specified in Sec. 60.675(c)(3) requires averaging of more than 6 minutes of observations which would dampen the effect of any errors.



State of Utah

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GUIDELINES

TO: New Source Review Section

FROM: C.C. Patel, P.E. *[Signature]*

THROUGH: Montie Keller *[Signature]*
Lynn Menlove *[Signature]*

SUBJECT: BACT/Asphalt Plants

DATE: April 18, 1995

The following base line values (starting points) will be used to make final determinations of Best Available Control Technology (BACT) limits for new asphalt plants:

0.024 gr/dscf PM₁₀ for plants that use pit run material

0.028 gr/dscf PM₁₀ for plants that use recycled pit run asphalt pavement mix

The same emission levels will be used regardless of the control devices to be installed. Most of the asphalt plants in Utah have historically demonstrated that these levels are normally achievable using bag houses and wet scrubbers as control technology.

Federal rule (NSPS standard) requires emissions limits in terms of TSP. However, EPA Region VIII has recently concurred that the measurements for both TSP and PM₁₀ are not necessary. One of the two pollutants may be measured, and the value of the other pollutant can be arrived at by using a correlating ratio. As our policy, we will monitor particulate emissions by measuring PM₁₀. An 80 % PM₁₀ to TSP ratio will be used for the particulate emissions leaving a high efficiency control device. This ratio can be changed on a case by case basis if a different one is established based on substantial actual quality data. Therefore, the following will be the BACT base line (starting points) for TSP:

0.030 gr/dscf for plants that use pit run material

0.035 gr/dscf for plants that use recycled pit run asphalt pavement mix

Note that these levels are all more stringent than the NSPS of 0.040 gr/dscf. We do not normally consider 0.040 gr/dscf as BACT.

Hot Mix Asphalt Plant

Temperature		Heat of Vaporization
Desired	290 F	water 970.3 Btu/lbm
Ambient	50 F	
		4% Aggregate moisture content
Specific Heat		
aggregate	0.22 Btu/lbm-F	Required Heat
water	1 Btu/lbm-F	198,200 Btu/Ton

The price of waste oil is between 60% & 80% of the market price of heating oil. 70%

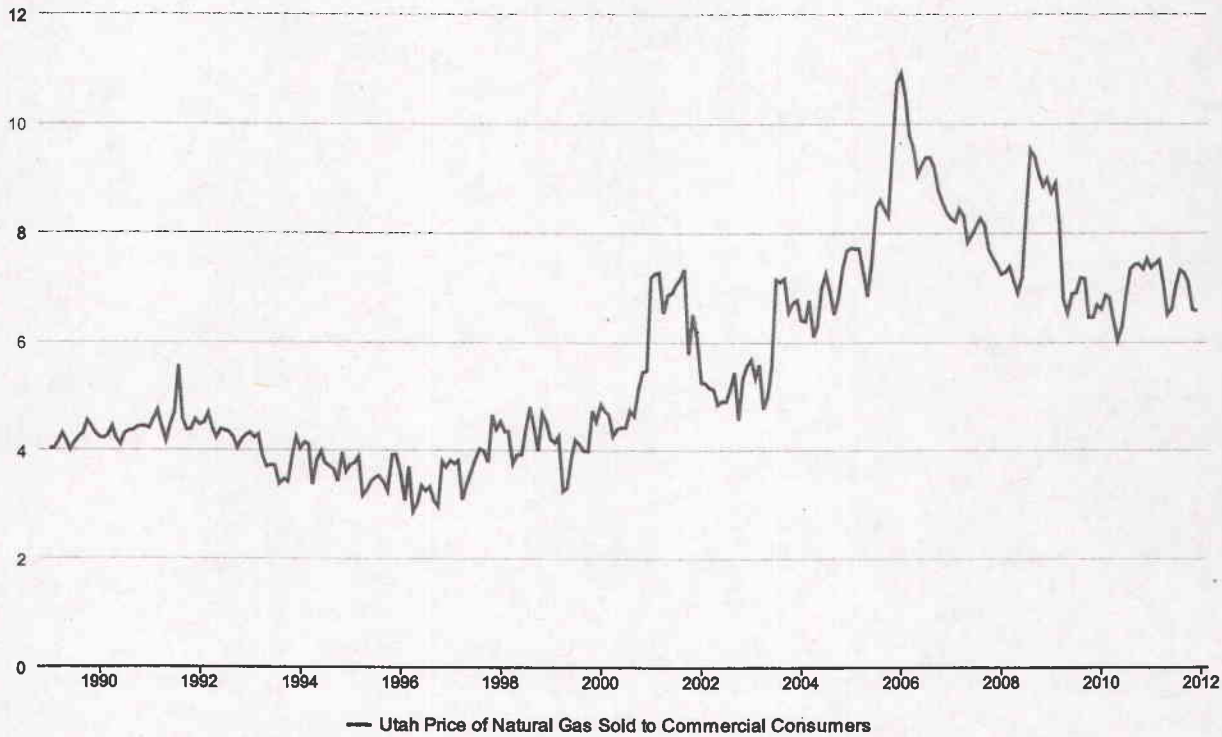
		LHV	Cost to Produce	NOx	EF (lb/ton)	Incremental Cost (\$/Ton removed)	Combined			
		BTU/unit	Cost/MMBtu	\$/Ton	SO2	VOC	NOx	SO2	VOC	Cost
\$2.31	\$/gallon	Waste Oil	150,000	\$15.40	\$3.05	0.055	0.058	0.032	\$0	\$0
\$3.30	\$/gallon	Heating Oil	140,000	\$23.57	\$4.67	0.055	0.011	0.032	-	\$68,918
\$4.50	\$/gallon	Diesel	140,000	\$32.14	\$6.37	0.055	0.011	0.032	-	\$141,210
\$1.75	\$/gallon	Propane	82,000	\$21.34	\$4.23	0.026	0.0034	0.032	-	\$28,172
\$9.00	\$/1000 ft3	Natural Gas	1,000	\$9.00	\$1.78	0.026	0.0034	0.032	-\$87,481	-\$30,346



U.S. Energy Information
Administration

Natural Gas Prices

\$/Mcf



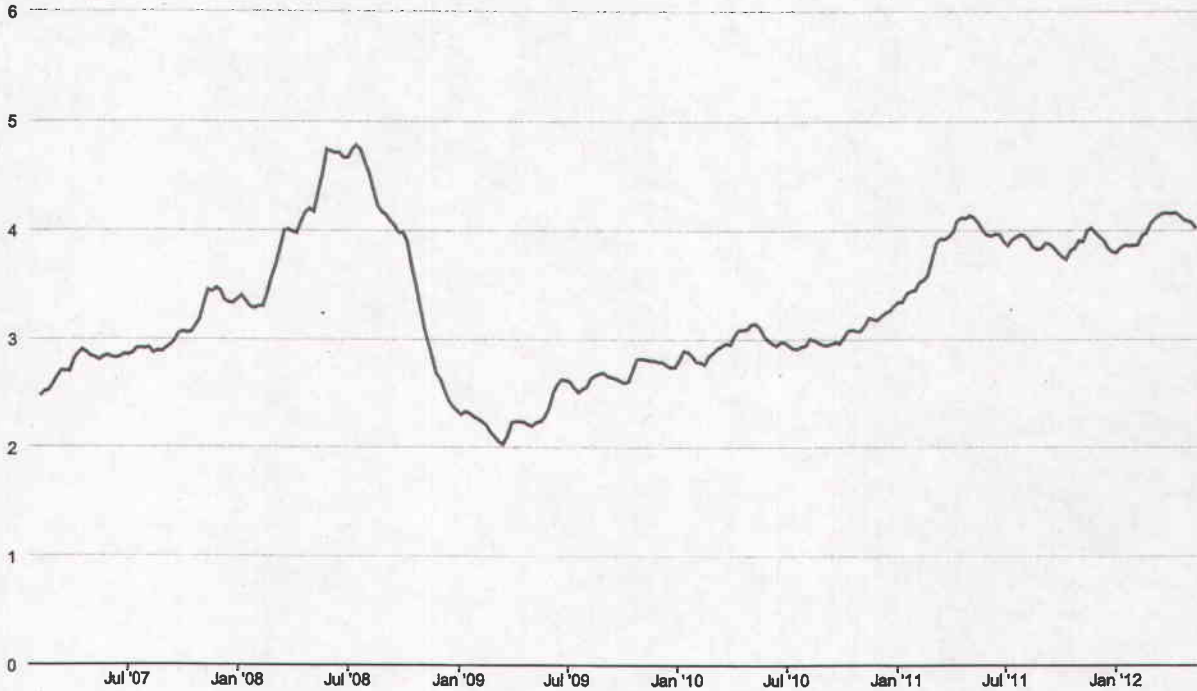
Source: U.S. Energy Information Administration



U.S. Energy Information
Administration

Weekly Retail Gasoline and Diesel Prices

\$/gal



— U.S. No 2 Diesel Ultra Low Sulfur (0-15 ppm) Retail Prices

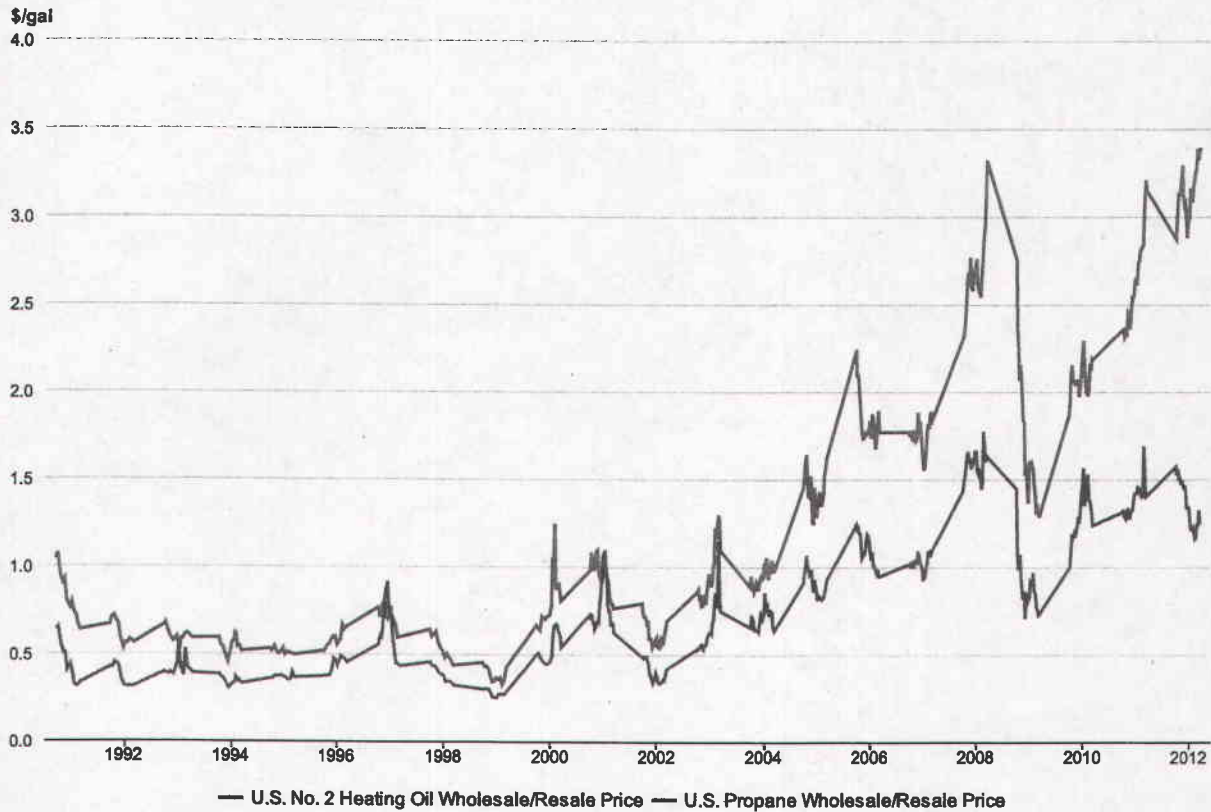


Source: U.S. Energy Information Administration



U.S. Energy Information
Administration

Weekly Heating Oil and Propane Prices (October - March)



Source: U.S. Energy Information Administration

R307. Environmental Quality, Air Quality.

R307-309. Nonattainment and Maintenance Areas for PM10 and PM2.5: Fugitive Emissions and Fugitive Dust.

R307-309-1. Purpose.

This rule establishes minimum work practices and emission standards for sources of fugitive emissions and fugitive dust [~~listed in Section IX, Part H of the state implementation plan or located in PM10 nonattainment and maintenance areas to meet the reasonably available control measures for PM10 required in section 189(a)(1)(C) of the Act~~].

R307-309-2. Definitions.

The following addition definition applies to R307-309:

"Material" means sand, gravel, soil, minerals, and other matter that may create fugitive dust.

R307-309-3. Applicability.

(1) Applicability. R307-309 applies to all sources of fugitive dust and fugitive emissions [~~listed in Section IX, Part H of the state implementation plan or~~] located within Box Elder, Cache, Davis, Salt Lake, Tooele, Utah and Weber counties [~~in a nonattainment or maintenance area for PM10~~], except as specified in R307-309-3(2) [below].

(2) Exemptions.

(a) The provisions of R307-309 do not apply to agricultural or horticultural activities specified in 19-2-114 (1)-(3).

(b) Any activity subject to R307-307 is exempt from R307-309-7.

~~[(3) Compliance Schedule. Any source located in a new nonattainment area for PM10 is subject to R307-309 180 days after the area is designated nonattainment by the Environmental Protection Agency. Provisions of R307-205 shall continue to apply to the owner or operator of a source during this transition period.]~~

R307-309-4. Fugitive Emissions.

(1) Fugitive emissions from any source shall not exceed 15% opacity.

(2) Opacity observations of fugitive emissions from stationary sources shall be conducted in accordance with EPA Method 9.

(3) For intermittent sources and mobile sources, opacity observations shall use procedures similar to Method 9 [~~but the requirement for observations to be made at 15-second intervals over a six minute period shall not apply~~].

R307-309-5. General Requirements for Fugitive Dust.

(1) Except as provided in R307-309-5([2]3) [~~below~~], opacity caused by fugitive dust shall not exceed:

(a) 10% at the property boundary; and

(b) 20% on site

(2) Any person owning or operating a new or existing source of fugitive dust one-quarter acre or greater in size shall submit a fugitive dust control plan to the director in accordance with R307-309-6.

(3) Opacity in R307-309-5(1) [~~above~~] shall not apply when the wind speed exceeds 25 miles per hour [~~and~~] if the owner or operator

has implemented, and continues to implement, the accepted ~~[is taking appropriate actions to control]~~ fugitive dust control plan in R307-309-6 and administers at least one of the following contingency measures: ~~[]~~

- ~~(a) Pre-event watering;~~
- ~~(b) Hourly watering;~~
- ~~(c) Additional chemical stabilization; or~~
- ~~(d) Cease or reduce fugitive dust producing operations.~~

~~[If the source has a fugitive dust control plan approved by the executive secretary, control measures in the plan are considered appropriate.]~~

~~([b]4) Wind speed may be measured by a hand-held anemometer or equivalent device.~~

~~([3]5) Opacity observations of [emissions from stationary sources shall be conducted in accordance with EPA Method 9. For intermittent sources and mobile sources, opacity observations shall use procedures similar to Method 9, but the requirement for observations to be made at 15-second intervals over a six-minute period shall not apply] fugitive dust from any source shall be measured at the densest point of the plume.~~

~~(a) For mobile sources, visible emissions shall be measured at a point not less than 1/2 vehicle length behind the vehicle and not less than 1/2 the height of the vehicle.~~

~~(b) Opacity observations of emissions from stationary sources shall be measured in accordance with EPA Method 9.~~

R307-309-6. Fugitive Dust Control Plan.

~~(1) Any person owning or operating a new or existing source of fugitive dust, including storage, hauling or handling operations, [or engaging in] clearing or leveling of land one-quarter acre or greater in size, earthmoving, excavation, [or] moving [ement of] trucks or construction equipment over cleared land one-quarter acre or greater in size or access haul roads, or [engaging in] demolition activities including razing homes, buildings or other structures, shall submit a fugitive dust control plan [a plan to control fugitive dust to the executive secretary] on a form provided by the director. [no later than 30 days after the source becomes subject to R307-309.]~~

~~(2) Activities regulated by R307-309 shall not commence before the fugitive dust control plan is accepted by the Division of Air Quality. [The plan shall address fugitive dust control strategies for the following operations as applicable:]~~

- ~~(a) Material Storage;~~
- ~~(b) Material handling and transfer;~~
- ~~(c) Material processing;~~
- ~~(d) Road ways and yard areas;~~
- ~~(e) Material loading and dumping;~~
- ~~(f) Hauling of materials;~~
- ~~(g) Drilling, blasting and pushing operations;~~
- ~~(h) Clearing and leveling;~~
- ~~(i) Earth moving and excavation;~~
- ~~(j) Exposed surfaces;~~
- ~~(k) Any other source of fugitive dust.~~
- ~~(2) Strategies to control fugitive dust may include:~~
- ~~(a) Wetting or watering;~~

~~(b) Chemical stabilization;~~
~~(c) Enclosing or covering operations;~~
~~(d) Planting vegetative cover;~~
~~(e) Providing synthetic cover;~~
~~(f) Wind breaks;~~
~~(g) Reducing vehicular traffic;~~
~~(h) Reducing vehicular speed;~~
~~(i) Cleaning haul trucks before leaving loading area;~~
~~(j) Limiting pushing operations to wet seasons;~~
~~(k) Paving or cleaning road ways;~~
~~(l) Covering loads;~~
~~(m) Conveyor systems;~~
~~(n) Boots on drop points;~~
~~(o) Reducing the height of drop areas;~~
~~(p) Using dust collectors;~~
~~(q) Reducing production;~~
~~(r) Mulching;~~
~~(s) Limiting the number and power of blasts;~~
~~(t) Limiting blasts to non windy days and wet seasons;~~
~~(u) Hydro drilling;~~
~~(v) Wetting materials before processing;~~
~~(w) Using a cattle guard before entering a paved road;~~
~~(x) Washing haul trucks before leaving the loading site;~~
~~(y) Terracing;~~
~~(z) Cleaning the materials that may create fugitive dust on a public or private paved road promptly; or~~
~~(aa) Preventing, to the maximum extent possible, material from being deposited onto any paved road other than a designated deposit site.~~
~~(3) Each source shall comply with all provisions of the fugitive dust control plan as approved by the executive secretary.]~~

R307-309-7. Storage, Hauling and Handling of Aggregate Materials.

Any person owning, operating or maintaining a new or existing material storage, handling or hauling operation shall prevent, to the maximum extent possible, material from being deposited onto any paved road other than a designated deposit site. Any such person who deposits materials that may create fugitive dust on a public or private paved road shall clean the road [~~promptly~~]immediately.

R307-309-8. Construction and Demolition Activities.

Any person engaging in clearing or leveling of land with an area of one-quarter acre or more, earthmoving, excavating, construction, demolition, or moving trucks or construction equipment over cleared land or access haul roads shall prevent, to the maximum extent possible, material from being deposited onto any paved road other than a designated deposit site. Any such person who deposits materials that may create fugitive dust on a public or private paved road shall clean the road [~~promptly~~]immediately.

R307-309-9. Roads.

(1) Any person responsible for construction or maintenance of any existing road or having right-of-way easement or possessing the right to use the same whose activities result in fugitive dust from

the road shall minimize fugitive dust to the maximum extent possible. Any such person who deposits materials that may create fugitive dust on a public or private paved road shall clean the road ~~[promptly]~~ immediately.

(2) Unpaved Roads. Any person responsible for construction or maintenance of any new or existing unpaved road shall prevent, to the maximum extent possible, the deposit of material from the unpaved road onto any intersecting paved road during construction or maintenance. Any person who deposits materials that may create fugitive dust on a public or private paved road shall clean the road ~~[promptly]~~ immediately.

R307-309-10. Mining Activities.

(1) Fugitive dust, construction activities, and roadways associated with mining activities are regulated under the provisions of R307-309-10 and not by R307-309-7, 8, 9, and 11.

(2) Any person who owns or operates a mining operation shall minimize fugitive dust as an integral part of site preparation, mining activities, and reclamation operations.

(3) The fugitive dust control measures to be used may include:

(a) ~~[p]~~ Periodic watering of unpaved roads,

(b) ~~[e]~~ Chemical stabilization of unpaved roads,

(c) ~~[p]~~ Paving of roads,

(d) ~~[prompt]~~ Immediate removal of coal, rock minerals, soil, and other dust-forming debris from roads and frequent scraping and compaction of unpaved roads to stabilize the road surface,

(e) ~~[r]~~ Restricting the speed of vehicles in and around the mining operation,

(f) ~~[r]~~ Revegetating, mulching, or otherwise stabilizing the surface of all areas adjoining roads that are a source of fugitive dust,

(g) ~~[r]~~ Restricting the travel of vehicles on other than established roads,

(h) ~~[e]~~ Enclosing, covering, watering, or otherwise treating loaded haul trucks and railroad cars, to minimize loss of material to wind and spillage,

(i) ~~[s]~~ Substitution of conveyor systems for haul trucks and covering of conveyor systems when conveyed loads are subject to wind erosion,

(j) ~~[m]~~ Minimizing the area of disturbed land,

(k) ~~[p]~~ Prompt revegetation of regraded lands,

(l) ~~[p]~~ Planting of special windbreak vegetation at critical points in the permit area,

(m) ~~[c]~~ Control of dust from drilling, using water sprays, hoods, dust collectors or other controls approved by the ~~[executive secretary]~~ director.

(n) ~~[r]~~ Restricting the areas to be blasted at any one time,

(o) ~~[r]~~ Reducing the period of time between initially disturbing the soil and revegetating or other surface stabilization,

(p) ~~[r]~~ Restricting fugitive dust at spoil and coal transfer and loading points,

(q) ~~[c]~~ Control of dust from storage piles through use of enclosures, covers, or stabilization and other equivalent methods or techniques as approved by the ~~[executive secretary]~~ director, or

(r) [o]Other techniques as determined necessary by the [executive secretary]director.

R307-309-11. Tailings Piles and Ponds.

(1) Fugitive dust, construction activities, and roadways associated with tailings piles and ponds are regulated under the provisions of R307-309-11 and not by R307-309-7, 8, 9, and 10.

(2) Any person owning or operating an existing tailings operation where fugitive dust results from grading, excavating, depositing, or natural erosion or other causes in association with such operation shall take steps to minimize fugitive dust from such activities. Such controls may include:

- (a) [w]Watering,
- (b) [e]Chemical stabilization,
- (c) [s]Synthetic covers,
- (d) [v]Vegetative covers,
- (e) [w]Wind breaks,
- (f) [m]Minimizing the area of disturbed tailings,
- (g) [r]Restricting the speed of vehicles in and around the tailings operation, or
- (h) [o]Other equivalent methods or techniques which may be approvable by the [executive secretary]director.

R307-309-12. Compliance Schedule.

All sources within Salt Lake County, Utah County and the city of Ogden shall be in compliance with R307-309 upon the effective date of this rule. All sources within Box Elder County, Cache County, Davis County, Tooele County, and the remaining portions of Weber shall be in compliance with R307-309 within 30 days of the effective date of this rule.

KEY: air pollution, fugitive dust[7-PM10]

Date of Enactment or Last Substantive Amendment: [September 2, 2005]2012

Notice of Continuation: June 2, 2010

Authorizing, and Implemented or Interpreted Law: 19-2-101; 19-2-104; 19-2-109



State of Utah

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Governor

GREG BELL
Lieutenant Governor

Department of Environmental Quality

Amanda Smith
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

DAQ-069-12

MEMORANDUM

TO: Air Quality Board

THROUGH: Bryce C. Bird, Executive Secretary

FROM: Alan Humpherys, Environmental Engineer

DATE: August 22, 2012

SUBJECT: PROPOSE FOR PUBLIC COMMENT: R307-312. Aggregate Processing Operations for PM_{2.5} Nonattainment Areas.

A Reasonably Available Control Technology (RACT) analysis is required for all point sources within the PM_{2.5} nonattainment area. The only point source belonging to the aggregate processing industry within the PM_{2.5} nonattainment area is Geneva Rock Products: Point of the Mountain Facility, which includes the Hansen-Lehi Pit and the Mount Jordan Pit. Any controls required as RACT for the Geneva Rock Products: Point of the Mountain Facility would also be RACT for other sources belonging to the aggregate processing industry. Therefore, the DAQ began working with the Association of General Contractors (AGC) in October 2011 to evaluate the efficiency and cost effectiveness of different controls for the aggregate processing industry. Controls for fugitive sources (haul roads, storage piles, exposed areas, etc.) are addressed in R307-309.

This rule addresses controls for non-fugitive sources, including aggregate processing equipment (crushers, screens, and conveyors), concrete batch plants, and hot mix asphalt plants. The proposed rule, as currently written, applies to the entire county that includes a PM_{2.5} nonattainment area.

Aggregate Processing Equipment Opacity Limits

The DAQ evaluated add-on controls and water application for aggregate processing equipment. The DAQ determined add-on controls, like baghouses, were too expensive for the majority of sources based on the amount of pollution controlled. Water application is currently used to control PM_{2.5} emissions from most aggregate processing equipment located in the PM_{2.5} nonattainment area. New Source Performance Standards (NSPS) 40 CFR 60 Subpart OOO has opacity limits for nonmetallic mineral processing plants (NMPP). This rule applies to facilities that commence construction, modification, or reconstruction after

August 31, 1983. In 2009, this rule was updated to include more stringent opacity limits for facilities that commence construction, modification, or reconstruction on or after April 22, 2008.

While most facilities within the PM_{2.5} nonattainment area were constructed prior to April 22, 2008, and are not subject to the more stringent opacity limits, the majority of existing facilities currently meet the more stringent opacity limits. Therefore, these more stringent opacity limits will be adopted for all facilities located in the PM_{2.5} nonattainment area regardless of the manufacture date of the equipment. Facilities that are not currently meeting the more stringent opacity limits will need to make modifications to their existing spray systems to come into compliance. These modifications may include changing spray nozzles and adding more water. These costs should be minimal, and all existing facilities should be able to comply with R307-312 by the implementation date.

Aggregate processing equipment in the nonattainment area was evaluated using the RACT process. The limits for the aggregate processing equipment will be as follows: all crushers will be required to meet an opacity limit of 12%, all screens will be required to meet an opacity limit of 7%, and all conveyor transfer points will be required to meet an opacity limit of 7%.

Concrete Batch Plant Opacity Limits

In addition to conveyor transfer points, concrete batch plants have mixers and silos. Mixers and silos are currently controlled with fabric filter devices. NSPS Subpart OOO has emission limits from control devices of 7% opacity; however, NSPS Subpart OOO does not apply to concrete batch plants. The processes and materials included in NSPS Subpart OOO are the same as the processes and the materials in a concrete batch plant; therefore, the same controls and limits should apply. For the same reasons used for setting aggregate processing equipment opacity limits, the concrete batch plant opacity limits are set to 7% opacity.

Asphalt Plant PM_{2.5} Emission Rates

Hot mix asphalt plants that commence construction or modification after June 11, 1973, are subject to NSPS Subpart I. NSPS Subpart I requires that particulate matter (PM) be controlled from all new hot mix asphalt plants and that compliance be demonstrated within 180 days of startup. The PM limit in NSPS Subpart I is 0.04 grains per dscf. Best Available Control Technology (BACT) determinations since 1995 have resulted in filterable PM₁₀ emission rates of at most 0.024 grains per dscf. Current limits for PM_{2.5} have not been established for hot mix asphalt plants, so based on previous BACT determinations for PM₁₀, the filterable PM_{2.5} emission limit from a hot mix asphalt plant dryer will be 0.024 grains per dscf.

Condensable PM_{2.5} emissions are also emitted from hot mix asphalt plants, but emission rates vary from source to source. The conventional controls for hot mix asphalt plants are not able to reduce condensable PM_{2.5} emissions, and no examples were found of current hot mix asphalt plants reducing condensable PM_{2.5} emissions. Due to the reasons above, condensable PM_{2.5} emissions are not being included with the hot mix asphalt limit for PM_{2.5}. Source specific limits for condensable PM_{2.5} emissions must be conducted on a case-by-case basis. This evaluation would occur through the permitting process. DAQ recommends the Board specifically seek comments on the appropriateness of excluding condensable PM_{2.5} emissions from the hot mix asphalt plant PM_{2.5} limit.

Asphalt Plant Fuel Usage

The DAQ evaluated add-on controls for hot mix asphalt plants to control NO_x, SO₂, and VOC emissions. Potential add-on controls did not meet RACT requirements, and the DAQ did not find any examples of current hot mix asphalt plants utilizing add-on controls to reduce NO_x, SO₂, and VOC emissions. Another option to reduce emissions is to change the fuel being used in the hot mix asphalt plants. The different fuels used in hot mix asphalt plants include natural gas, liquefied petroleum gas (LPG), heating oil, diesel fuel, and waste oil. NO_x emissions from natural gas are 47% of what the emissions are from waste oil, and SO₂ emissions from natural gas are 6% of what the emissions are from waste oil. On this basis, the DAQ decided to restrict the production of material to 50% of the plant's rated capacity during the times that facilities are using a fuel other than natural gas or LPG from November 1 to March 1. This option will allow sources the flexibility to utilize other fuels if necessary while still reducing emissions.

Temporary hot mix asphalt plants are usually located in remote locations where natural gas is not available. In addition, temporary hot mix asphalt plants have other operational restrictions placed upon them by portable approval orders and temporary relocation letters. Those methods are used to reduce emissions from temporary hot mix asphalt plants; therefore, R307-312 will not apply to temporary hot mix asphalt plants. DAQ recommends the Board seek comments on the appropriateness of excluding temporary hot mix asphalt plants from the reduced production rate based on the fuel used.

Staff Recommendation: Staff recommends the Board propose R307-312 for public comment with a specific request for comments on the appropriateness of excluding condensable PM_{2.5} emissions from the hot mix asphalt plant PM_{2.5} limit and on the appropriateness of excluding temporary hot mix asphalt plants from the reduced production rate based on the fuel used.

R307. Environmental Quality, Air Quality.**R307-312. Aggregate Processing Operations for PM2.5 Nonattainment Areas.****R307-312-1. Purpose.**

R307-312 establishes emission standards for sources in the aggregate processing industry, including aggregate processing equipment, hot mix asphalt plants, and concrete batch plants.

R307-312-2. Applicability.

(1) R307-312 applies to all crushers, screens, conveyors, hot mix asphalt plants, and concrete batch plants located within Box Elder, Cache, Davis, Salt Lake, Tooele, Utah, or Weber counties.

(2) The provisions of R307-312 do not apply to temporary hot mix asphalt plants.

R307-312-3. Definitions.

The following definitions apply to R307-312:

"Concrete batch plant" means any facility used to manufacture concrete by mixing aggregate with cement.

"Conveyor" means a device for transporting nonmetallic materials from one piece of equipment to another.

"Crusher" means a machine used to crush any nonmetallic minerals.

"Hot mix asphalt plant" means any facility used to manufacture hot mix asphalt by heating and drying aggregate and mixing with asphalt cements.

"Nonmetallic mineral" has the same definition as defined in 40 CFR 60.671.

"Screen" means a device for separating nonmetallic minerals according to size by passing undersize material through one or more mesh surfaces in series, and retaining oversize material on the mesh surfaces.

"Temporary" means not more than 180 operating days and not more than 365 calendar days.

R307-312-4. Visible Emissions.

(1) Visible emissions from sources subject to R307-312 shall not exceed the opacity limits as specified in Table 1.

TABLE 1

<u>CATEGORY</u>	<u>OPACITY LIMIT</u>
Crushers	12%
Screens	7%
Conveyor transfer points	7%
Concrete batch plants	7%

(2) Opacity Observation.

(a) Opacity observations of emissions shall be conducted according to 40 CFR 60, Appendix A, Method 9.

R307-312-5. Hot Mix Asphalt Plants.

(1) The filterable PM2.5 emission rate from a hot mix asphalt plant dryer shall not exceed 0.024 grains per dscf.

(a) Filterable PM2.5 emissions shall be determined by 40 CFR 51, Appendix M, Method 201A.

(2) From November 1 to March 1, a hot mix asphalt plant burning a fuel other than natural gas or liquefied petroleum gas (LPG) shall not produce more than 50% of its rated capacity.

(a) Production shall be determined by scale house records or equivalent method on a daily basis. Compliance shall be based on either the daily amount of hot mix asphalt produced averaged over the operating day or the daily amount of hot mix asphalt produced while burning a fuel other than natural gas or LPG averaged over the time the plant is operating while burning a fuel other than natural gas or LPG each day.

R307-312-6. Compliance Schedule.

(1) All sources subject to R307-312-4 or R307-312-5(2) shall be in compliance with this rule by June 7, 2013.

(2) All sources subject to R307-312-5(1) that begin construction prior to June 7, 2013, shall submit test results demonstrating compliance with R307-312-5(1) to the director by December 14, 2015.

(3) All sources subject to R307-312-5(1) that begin construction on or after June 7, 2013, shall submit test results demonstrating compliance with R307-312-5(1) to the director no later than 180 days after initial startup.

KEY: air pollution, aggregate, asphalt, concrete

Date of Enactment or Last Substantive Amendment: 2012

Authorizing, and Implemented or Interpreted Law: 19-2-101; 19-2-104; 19-2-109